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NEW SPECIES OF NORTH AMERICAN BEES OF THE GENUS *ANDRENA*

CONTAINED IN THE COLLECTIONS OF THE ACADEMY OF
NATURAL SCIENCES OF PHILADELPHIA

BY HENRY L. VIERECK

The following descriptions are contributions toward a monograph of the Pan-American species of *Andrena*.

The proportions are in terms of divisions of a disc micrometer with 10 divisions to 1 mm., used in a Spencer Lens Company binocular with 10X Spencer ocular and 40 mm. Spencer objective; each division appears to equal 42 μ .

Andrena (Andrena) abacta¹ new species.

Type.—No. 4060, The Academy of Natural Sciences of Philadelphia. *Type locality*.—Texas. (No. 5, Belfrage?)

Related to *A. (A.) nigrae* Robertson and *A. (A.) salictaria* Robertson. It may prove to be a race of the latter species.

Female.—Length 8 mm.; **body** greenish, mostly covered with whitish hairs; **head** with its facial line: transfacial line :: 43: 51, axial line : temporal line :: 21 : 10, malar line : joint 3 of antennae :: 1:6, ocelloccipital line : greatest diameter of lateral ocellus :: 4:4, elevated portion of malar space virtually wanting, head covered with whitish hairs, front greenish and rather finely, longitudinally striate, not elevated into a welt along the fovea, fovea at most: ocellocular line :: 6:9, foveal band wanting at upper end of the inner eye margin, distance between fovea and ocelli : ocellocular line :: 2.5: 9, fovea attenuated below its middle where it is apparently only one-half or a little more than half as wide as the greatest width of the fovea, the latter continued to a point apparently a little below the antennal line, fovea filled with pale golden hairs, fovearea represented by a beveled shiny space, face shiny, partly indistinctly reticulate, with indistinct punctures that are as many as four puncture widths apart, clypeus brownish, slightly elevated above the apical margin, almost planate, sculptured like the face except that the punctures are larger and better defined, clypearea present but poorly defined, clypeus thinly hairy its sculpture not at all hidden by hairs, labrarea nearly semicircular in outline, its width at base : length down the middle :: 7: 2, labrarea at base apparently a little more than half as wide as the labrum, the latter with a fringe of pale golden hairs, labrum without a median longitudinal crista between the labrarea and apical edge of labrum, joint 3 of antennae : 4+5 :: 6: 5, joint 4 and 5 thicker than long, the

¹ This specific name was proposed for this species by Prof. W. M. Davis.

succeeding joints from distinctly thicker than long to slightly thicker than long, except joint 12 which is distinctly longer than thick, antennae blackish brown throughout, mandibles typical, robust, extending to the outer edge of the labrarea, black except for the apical third which is clear dark reddish, palpi nearly typical; **thorax** covered with an abundance of whitish hairs which are shorter on the dorsulum than on the mesopleura, dorsulum dullish, greenish and purplish, finely reticulated and sparsely punctured, the punctures wider apart than on the clypeus, notauli represented by a shiny line, mesopleura sculptured much like the dorsulum but not so closely or distinctly punctured, scutel shiny, hairy, colored and sculptured much like the dorsulum but feebly so, metanotum hairy and sculptured and colored like the dorsulum except that the sculpture is denser and less distinct, tegulae pale yellowish stramineous, polished, wing base dull yellowish stramineous, subcosta brownish, stigma pale yellowish stramineous, rest of veins almost concolorous with the stigma but not so yellowish, the wing hairs pale golden, first recurrent vein received by the second submarginal cell before the middle and a little more than twice as far from the first transverse cubitus as the latter is to the stigma on the radial vein, nervulus not interstitial, received by the median cell and forming an acute angle with the second abscissa of the median vein, membrane with a uniformly yellowish tinge, nearly colorless, legs dark brown except for the tarsi and hind tibiae which are more or less yellowish stramineous, legs covered with pale hairs, scopa typical, its hairs whitish throughout, hind metatarsi at most apparently a little wider than the mid metatarsi; **propodeum** with its enclosure poorly defined, shiny and rather coarsely sculptured on its upper aspect, finely reticulated on its hind aspect, rest of upper face of propodeum sculptured somewhat like the mesopleura but seemingly impunctate, and covered with finer hair, propodeal pleura shiny, finely reticulated, with a few scattered shallow punctures; **abdomen** brownish with a slight greenish tinge, with its tergum shiny and sculptured much like the sides of the propodeum but with smaller inconspicuous punctures, the punctures from two to six or more puncture widths apart on the first tergite, the punctures hardly closer on the succeeding tergites, second, third and fourth tergites with an apical, whitish hair band that is interrupted in the middle of the second and third, apical edge of first, second, third and fourth tergites with a pale stramineous border, second tergite with its elevated portion down the middle : depressed portion :: 14: 6, fifth tergite shining, reticulate, its punctures distinct and closer together than on the other tergites, pygidium nearly planate, somewhat concave, reticulate, narrowly truncate at apex, tergum with inconspicuous pale, nearly erect hairs in addition to the hair bands, fimbria pale golden.

Andrena (Andrena) albiculta² new species

Type.—No. 4045, The Academy of Natural Sciences of Philadelphia. *Type locality*.—Southern California. (H. K. Morrison.)

Related to *A. (A.) decussata* Viereck.

² The above specific name was proposed for this species by Prof. W. M. Davis.

Female.—Length 10.5 mm.; **body** black, mostly covered with pale ochreous, almost white hairs; **head** with its facial line : transfacial line :: 70 : 82, axial line : temporal line :: 30 : 13, malar line : joint 3 of antennae :: 1 : 11, ocellocapital line : greatest diameter of lateral ocellus :: 7 : 6, elevated portion of malar space represented by a shining line, head covered with whitish and dark or blackish hairs, front rather distinctly longitudinally striate, not elevated into a welt along the fovea, fovea at most : ocellocular line :: 8 : 15, foveal band present and at upper end of the inner eye margin : ocellocular line :: 2 : 15, distance between fovea and ocelli : ocellocular line :: 5 : 15, fovea deep at its upper end, nearly parallel-sided, seemingly a little narrower above its middle than below its middle, the latter continued to a point apparently a little above the antennal line, fovea-filled with pale brownish hairs on its upper half, with whitish hairs on its lower half, vertex and temples along the upper edge of the eye with dark hairs, face dark brown, mostly finely reticulated, with indistinctly defined punctures of two sizes that are as many as four puncture widths apart, supraclypeal area dark reddish brown, clypeus slightly elevated above the apical margin, convex, sculptured like the face except that the punctures are larger and better defined and as many as six puncture widths apart, clypearea wanting, clypeus thinly hairy with black or blackish hairs, its sculpture not at all hidden by hairs, labrarea narrowly subemarginate, its width at base : length down the middle :: 15 : 4, width at apex : length down the middle :: 2 : 4, greatest length : width at base :: 4.5 : 15, labrarea at base nearly two-thirds as wide as the labrum, the latter with a fringe of golden brown hairs, labrum without a median longitudinal crista but finely reticulated between the labrarea and apical edge of labrum, joint 3 of antennae : 4+5 :: 11 : 11, joints 4 to 9 thicker than long, the succeeding joint as thick as long, joint 11 a little longer than thick, joint 12 distinctly longer than thick, antennae blackish brown throughout, mandibles typical, robust, extending to the outer edge of the labrarea, black except for the apical half which is more or less dark reddish, palpi nearly typical; **thorax** covered with an abundance of whitish hairs which are as long on the dorsulum as the whitish hairs on the mesopleura, dorsulum dullish, finely reticulated and punctured, the punctures nearly hidden by the hairs, from one to two puncture widths apart, notauli represented by a shiny line, anterior aspect of mesopleura with blackish hairs like the mesosternum, sculptured somewhat like the dorsulum but not so closely punctured, mesopleura not hidden by the sparse hairs, scutel hairy and sculptured much like the dorsulum laterally, its disc on each side nearly polished, metanotum hairy and sculptured much like the dorsulum except that the sculpture is denser and less distinct, tegulae dark brown, polished, wing base partly blackish brown, subcosta blackish brown, stigma pale brownish stramineous, rest of veins dull stramineous, with a blackish tinge, first recurrent vein received by the second submarginal cell before the middle and nearly as near to the first transverse cubitus as the first transverse cubitus is to the stigma on the radial vein, nervulus interstitial and forming an acute angle with the first abscissa of the discoidal vein, membrane uniformly tinged with brown, legs blackish brown except for the claws which are more or less pale brown, legs covered with blackish

brown or black hairs, *scopa* nearly typical, its hairs blackish throughout and at most only as long as the greatest width of the hind tibiae, hind metatarsi at most : mid metatarsi :: 13: 16; **propodeum** with its enclosure well defined, dullish and finely reticulated, finely rugulose and with vestigial ridges at base, rest of upper face of propodeum sculptured somewhat like the mesopleura but not so shiny nor so distinctly punctured, and covered with fine whitish hair, propodeal pleura with sparse shallow punctures and dark hairs and almost hidden by the whitish floccus; **abdomen** blackish brown with its tergum shiny and finely sculptured, the punctures fine and from two to six puncture widths apart on the first tergite, the punctures closer on the succeeding tergites, second, third and fourth tergites without an apical hair band, apical edge of first, second, third and fourth tergites with a brownish stramineous border, second tergite with its elevated portion down the middle: depressed portion :: 21: 10, fifth tergite shiny, reticulate, its punctures coarser than on the other tergites, pygidium slightly convex, without a shallow furrow on each side, rounded at apex, tergum covered with inconspicuous dark hairs, fimbria dark seal brown.

Andrena (Andrena) angustitarsata huardi new race

Type.—No. 4051, The Academy of Natural Sciences of Philadelphia. Type locality.—California. (No further data.)

Female.—Differs from typical *A. (A.) angustitarsata* Viereck only in the ochreous color of its pubescence.

Andrena (Andrena) argentscopa new species

Type.—No. 4044, The Academy of Natural Sciences of Philadelphia. Type locality.—California. (E. Norton.)

Related to *A. (A.) bisalidis* Viereck.

Female.—Length 7 mm.; **body** black, mostly covered with whitish hairs, **head** with its facial line : transfacial line :: 45: 57, axial line : temporal line :: 23: 12, malar line : joint 3 of antennae :: 1.5: .79, ocelloccipital line : greatest diameter of lateral ocellus :: 4: 4, elevated portion of malar space nearly wanting, front rather finely, longitudinally striate, not elevated into a welt along the fovea, fovea at most : ocellocular line :: 5: 10, foveal band represented by a shining line at upper end of the inner eye margin, distance between fovea and ocelli: ocellocular line :: 6: 10, fovea slightly attenuated below its middle where it is nearly as wide as the greatest width of the fovea, the latter continued to a point far below the clypeal line, fovea filled with pale cacao brown hairs, on its upper half, with pale ochreous hairs on its lower half, face dullish, finely reticulate, with indistinct punctures that are as many as three or four puncture widths apart, clypeus trenchantly elevated above the apical margin, slightly convex, sculptured like the face except that the punctures are larger and better defined, clypearea apparently wanting, clypeus thinly hairy, its sculpture not at all hidden by hairs, labrarea narrowly truncate its width at base : length down the middle :: 8: 4, width at apex : length down the middle :: 3: 4, labrarea at base nearly half as wide as the labrum, the latter with a fringe of pale golden hairs, labrum with a median longitudinal crista between the labrarea and the apical edge of labrum, joint 3 of antennae probably : 4+5 :: 9: 8, joints

4 and 5 probably thicker than long, the succeeding joints probably as thick as long or little longer than thick except perhaps joints 11 and 12 which are probably distinctly longer than thick, antennae probably blackish throughout, mandibles typical, robust, extending to the outer edge of the labrarea, black except for the apical half which is mostly dark reddish, palpi nearly typical; **thorax** covered with an abundance of whitish hairs which are much shorter on the dorsum than the almost whitish hairs on the mesopleura, dorsum dullish, finely reticulated and punctured like the face, notauli represented by an impressed line, mesopleura with whitish hairs, sculptured somewhat like the dorsum but not so distinctly, scutel hairy and sculptured much like the dorsum but more shiny, metanotum mostly finely rugulose, dullish, tegulae dark brown, polished, wing base partly blackish brown, subcosta blackish brown, stigma pale yellowish stramineous, rest of veins dull stramineous, with a blackish tinge, first recurrent vein received by the second submarginal cell a little before the middle and apparently one and one-half times as far from the first transverse cubitus as the first transverse cubitus is from the stigma on the radial vein, nervulus almost exactly interstitial and forming an acute angle with the first abscissa of the discoidal vein, membrane uniformly tinged with brown, legs blackish brown throughout, legs covered with brownish golden and whitish hairs, scopa typical, its hairs mostly silvery, hairs at base above decidedly darkened, hind metatarsi at most apparently a little narrower than mid metatarsi; **propodeum** with its enclosure poorly defined, dullish and finely reticulated, with short ill defined ridges at extreme base, rest of upper face of propodeum sculptured somewhat like the mesopleura and covered with pale whitish hair, propodeal pleura finely reticulated, with sparse shallow punctures, floccus whitish; **abdomen** with its tergum shiny, finely reticulated and indistinctly punctured, the punctures from two to six or more puncture widths apart on the first tergite, the punctures somewhat closer on the succeeding tergites, second, third and fourth tergites with a thin, apical, whitish hair band that is broadly interrupted in the middle of the second and third tergites, first, second, third and fourth tergites with the depressed margin brownish edged with pale stramineous, second tergite with its elevated portion down the middle : depressed portion :: 11:7, fifth tergite shiny, reticulate, its punctures coarser than on the other tergites, pygidium nearly planate, with a shallow furrow on each side, truncate at apex, brownish, tergum with inconspicuous pale hairs, in addition to the hair bands, fimbria pale golden.

Andrena (Andrena) barbarica³ new species

Type.—No. 4065, The Academy of Natural Sciences of Philadelphia. *Type locality*.—Tazewell, Virginia, June 10, 1915. (L. O. Jackson.)

Related to *A. (A.) integra* Smith.

Female.—Length 9 mm.; **body** black, mostly covered with pale ochreous almost white hairs, **head** with its facial line : transfacial line :: 52:63, axial line : temporal line :: 27:16, malar line : joint 3 of antennae :: 1:8, ocelloc-

³ This is Prof. W. M. Davis' name for this species.

cipital line : greatest diameter of lateral ocellus :: 4: 4, elevated portion of malar space virtually wanting, head covered with whitish hairs, front rather distinctly longitudinally striate, not elevated into a welt along the fovea, fovea at most : ocellular line :: 5: 12, foveal band present and at upper end of the inner eye margin : ocellular line nearly :: 2: 12, distance between fovea and ocelli : ocellular line :: 4: 12, fovea slightly attenuated below its middle and continued to a plane apparently near the clypeal line, fovea filled with pale ochreous, nearly white hairs, fovearea wanting, vertex and temples along the upper edge of the eye with pale hairs, face shiny, partly indistinctly reticulate, with distinct punctures of various sizes that are from nearly adjoining to as many as five puncture widths apart, lowermost portion of face with a sculptureless polished margin, clypeus slightly elevated above the apical margin, convex, finely reticulated, shiny and punctured, the punctures more nearly uniform, mostly as large or larger than the largest punctures on the face and mostly from three to five puncture widths apart, clypearea present but poorly defined, clypeus thinly hairy, its sculpture not at all hidden by hairs, labrarea truncate, its width at base : length down the middle :: 10: 5, width at apex : length down the middle :: 5: 5, labrarea at base : distance between lower corners of clypeus :: 10: 19, labrum with a fringe of dark golden hairs and without a median longitudinal crista between the labrarea and its apical edge, joint 3 of antennae : 4+5 :: 8: 7, joints 4 and 5 thicker than long, the succeeding joints as thick as long or a little longer than thick except joints 11 and 12 which are distinctly longer than thick, antennae blackish except that the flagel is coffee brown beneath, mandibles typical, robust, extending to near the outer edge of the labrarea, black except for the apical fourth which is mostly dark reddish, palpi nearly typical; **thorax** thinly covered with pale ochreous, almost white or white hairs which are shorter on the dorsulum where they are darker than the almost white hairs on the mesopleura, dorsulum shiny, finely reticulated and punctured like the face but more distinctly so, notauli represented by an impressed shiny line, middle of the posterior half of the dorsulum nearly polished, mesopleura with almost white hairs, sculptured somewhat like the dorsulum but not so sparsely or distinctly punctured, scutel almost bare and mostly impunctate and polished, metanotum hairy and densely, indefinitely, sculptured, tegulae blackish and pale stramineous, partly almost polished, wing base partly blackish brown, subcosta blackish brown, stigma dark brownish stramineous, rest of veins dull stramineous, first recurrent vein received by the second submarginal cell beyond the middle and distinctly nearer to the second transverse cubitus than the first transverse cubitus is to the stigma on the radial vein, nervulus not interstitial and forming an acute angle with the second abscissa of the median vein, membrane with a uniform yellowish brown tinge, legs blackish except for the tarsi which are more or less dark brownish stramineous, legs covered with pale ochreous and whitish hairs except for the dark ochreous and brownish hairs on parts of the tarsi and tibiae, scopa typical, pale ochreous, almost white except for the hairs at base above which are decidedly darkened, hind metatarsi at most as wide as the mid metatarsi; **propodeum** with its enclosure apically well, basally poorly defined, its upper aspect rather coarsely wrinkled and shiny, its hind aspect rather finely reticulated, rest of upper face

of propodeum sculptured like the upper aspect of the enclosure and covered with fine whitish hair, propodeal pleura partly impunctate, mostly with sparse indefinite shallow punctures, propodeal floccus thin and pale ochreous; **abdomen** with its tergum shiny and sculptured much like the temples except that the first and second tergites are nearly polished, the punctures mostly from three to eight puncture widths apart on the first tergite, the punctures closer together on the succeeding tergites, second, third, and fourth tergites with a thin, whitish apical hair band that is interrupted in the middle of the second and third, apical edge of second, third, and fourth tergites with a stramineous border, second tergite with its elevated portion down the middle : depressed portion :: 17:10, fifth tergite shiny, reticulate, its punctures closer together than on the other tergites, pygidium nearly planate, with an embossed central area, nearly pointed at apex, tergum with inconspicuous, pale, appressed hairs in addition to the hair bands, fimbria pale brownish golden.

Other localities.—Indiana; Ottawa, Kansas, June 6; Texas (Belfrage).

Andrena (Andrena) citrinihirta new species

Type.—No. 4040, The Academy of Natural Sciences of Philadelphia. *Type locality*.—California. (E. Norton.)

Related to *A. (A.) nubecula* Smith.

Female.—Length 8.5 mm.; **body** black, covered with pale ochreous, almost lemon yellow hairs, **head** with its facial line : transfacial line :: 48:61, axial line : temporal line :: 27:17, malar line : joint 3 of antennae :: 1.5 : 8, ocellocapital line : greatest diameter of lateral ocellus :: 5:4, elevated portion of malar space nearly wanting, front rather distinctly, longitudinally striate, not elevated into a welt along the fovea, with a rather distinct median longitudinal crista, fovea at most : ocellocular line :: 7.5:11, foveal band represented by a shining line and a nearly bare beveled area the width of which : ocellocular line :: 1:11, distance between fovea and ocelli : ocellocular line :: 4:11, fovea somewhat attenuated below its middle where it is apparently only a little narrower than the greatest width of the fovea, the latter continued to a point apparently a little below the antennal line, fovea filled with hairs that are concolorous with the hairs of the body, vertex and temples along the upper edge of the eye with hairs that are concolorous with the body hairs, face mostly polished, with indistinct punctures of two sizes which are as many as five or more puncture widths apart, clypeus slightly elevated above the apical margin, slightly convex, sculptured like the face except that the punctures are larger, sparser and better defined, clypearea present, polished, well defined, and on the lower half nearly half as wide as the labrarea, clypeus thinly hairy, its sculpture not at all hidden by hairs, labrarea emarginate, its width at base : length down the middle :: 8:4, width at apex : length down the middle :: 6:4, greatest length : width at base :: 5:8, labrarea at base nearly two-thirds as wide as the labrum, the latter with a fringe of golden hairs, labrum simple, joint 3 of antennae : 4+5 :: 9:8, joints 4 and 5 thicker than long, the succeeding joints as

thick as long or little longer than thick except joint 12 which is distinctly longer than thick, antennae very dark brown throughout, mandibles typical, robust, worn, black except for the apical half which is dark reddish, palpi nearly typical; **thorax** covered with an abundance of pale ochreous, almost yellow hairs which are mostly shorter on the dorsum where they are as coarse as the hairs on the mesopleura, dorsum mostly polished or nearly so, partly finely reticulated, punctured like the clypeus but more distinctly so and more closely, notauli represented by an impressed line, mesopleura with almost yellow hairs, sculptured somewhat like the dorsum but not so closely or distinctly punctured, scutell hairy and sculptured much like the dorsum, metanotum hairy, its sculpture hidden by its long coarse hairs, tegulae pale brownish stramineous, finely sculptured, wing base dark brown, subcosta dark brown, stigma pale brownish stramineous and concolorous or nearly so with the rest of the veins, first recurrent vein received by the second submarginal cell in or near the middle and nearly as near to the first transverse cubitus as the first transverse cubitus is to the stigma on the radial vein, nervulus received by the median cell and forming an acute angle with the second abscissa of the median vein, second transverse cubitus wanting in the left wing and only half developed in the right wing, membrane tinged with brown and with a dark brownish cloud at apex of the marginal cell and beyond along the anterior edge of the wing, legs dark brown except for the tarsi and the hind tibiae which are more or less paler brown, legs covered with yellowish and golden hairs, scopa typical, golden and concolorous, hind metatarsi at most distinctly narrower than mid metatarsi; **propodeum** with its enclosure poorly defined, shining and finely reticulated, rest of upper face of propodeum sculptured somewhat like the mesopleura but with smaller punctures, not so shining, and covered with finer yellowish hair, propodeal pleura nearly polished and with sparse shallow punctures and almost hidden by the yellowish floccus; **abdomen** with its tergum shining, punctured and finely reticulated, the punctures mostly from two to four puncture widths apart on the first tergite, the punctures hardly closer on the succeeding tergites, first, second, third and fourth tergites with a broad apical, yellowish hair band which is not interrupted in the middle and which occupies all of the depressed margin, apical edge of first, second, third and fourth tergites with a pale stramineous border, second tergite with its elevated portion down the middle : depressed portion :: 14: 10, fifth tergite shining, reticulate, its punctures coarser and not so close together as on the other tergites, pygidium nearly planate, partly reddish, nearly pointed at apex, tergum with inconspicuous pale appressed hairs in addition to the hair bands except on the first and second tergites where in addition there are some nearly erect hairs, fimbria yellowish.

Andrena (Andrena) coactipostica⁴ new species

Type.—No. 4037, The Academy of Natural Sciences of Philadelphia. *Type locality*.—Southern California (H. K. Morrison.)

Related to *A. (A.) distans* Provancher.

⁴ This specific name was proposed for this species by Prof. W. M. Davis.

Female.—Length 10 mm.; **body** black, mostly covered with pale grayish hairs; **head** with its facial line : transfacial line :: 59: 75, axial line : temporal line :: 31: 20, malar line : joint 3 of antennae :: 2: 10, ocelloccipital line : greatest diameter of lateral ocellus :: 5: 4.5, elevated portion of malar space nearly wanting, head covered with grayish hairs, front rather indistinctly, longitudinally striate, not elevated into a welt along the fovea, fovea at most : ocellocular line :: 10: 15, foveal band virtually wanting, distance between fovea and ocelli : ocellocular line :: 5: 15, fovea somewhat attenuated below its middle where it is apparently nearly as wide as the greatest width of the fovea, the latter continued to a point apparently a little below the clypeal line, fovea filled with pale seal brown hairs on the upper half, with pale ochreous hairs on the lower half, fovearea wanting, vertex and temples along the upper edge of the eye with grayish hairs, face mostly dullish, partly indistinctly reticulate and nearly polished, with indistinctly defined punctures that are as many as five puncture widths apart, clypeus slightly elevated above the apical margin, slightly convex, sculptured like the face except that it is nowhere nearly polished, the punctures are somewhat larger and well defined, clypearea present but poorly defined, clypeus thinly hairy its sculpture not at all hidden by hairs, labrarea truncate, its width at base : length down the middle :: 12: 4, width at apex : length down the middle :: 4: 4, labrarea at base nearly two-thirds as wide as the labrum, the latter with a fringe of golden hairs, labrum without a median longitudinal crista between the labrarea and apical edge of labrum, joint 3 of antennae : 4+5 :: 10: 9, joints 4 to 11 thicker than long, joint 12 distinctly longer than thick, antennae blackish throughout, mandibles typical, robust, extending to the outer edge of the labrarea, black except at the middle and at apex where they are dark reddish, palpi nearly typical; **thorax** covered with an abundance of grayish hairs which are so short on the dorsulum as to make a velvety covering, hairs of the dorsulum darker than the almost whitish long hairs on the mesopleura, dorsulum dullish, finely reticulated and punctured like the clypeus but less distinctly so and more closely punctured, notauli represented by a shining line, mesopleura with almost whitish hairs, sculptured somewhat like the face but not so closely or distinctly punctured, scutel nearly bare, hairy and sculptured much like the dorsulum but more densely so, metanotum hairy and sculptured like the scutel except that the sculpture is still denser and less distinct, and the hair less conspicuous, tegulae dark brown, polished, wing base partly blackish brown, subcosta blackish brown, stigma pale brownish stramineous, rest of veins dull stramineous, with a blackish tinge, first recurrent vein received by the second submarginal cell in the middle, and nearly as near to the second transverse cubitus as the first transverse cubitus is to the second transverse cubitus on the radial vein, nervulus interstitial and forming an acute angle with the first abscissa of the discoidal vein, membrane uniformly tinged with brown, legs blackish except for the claws which are more or less brownish stramineous, legs covered with grayish hairs, scopa typical, its hairs almost white, hairs at base above decidedly darkened, hind metatarsi at most apparently a little wider than mid metatarsi; **propodeum** with its enclosure poorly defined, dull-

ish and finely reticulated except down the middle of its basal half where it is somewhat rugulose, rest of upper face of propodeum sculptured somewhat like the mesopleura but duller, and covered with finer grayish hair, propodeal pleura reticulated, nearly polished, with sparse shallow punctures and nearly hidden by the almost white floccus; **abdomen** with its tergum shining, punctured and indistinctly reticulate, the punctures from nearly adjoining to three puncture widths apart on the first tergite, the punctures hardly sparser on the succeeding tergites, second, third and fourth tergites with an apical, whitish hair band that is interrupted in the middle of the second and third tergites, apical edge of first, second, third and fourth tergites with a pale stramineous border, second tergite with its elevated portion down the middle : depressed portion :: 20: 9, fifth tergite shining, indistinctly reticulate, its punctures not so close together as on the other tergites, pygidium slightly convex, without a shallow furrow on each side, nearly pointed at apex, indefinitely sculptured, tergum with inconspicuous, pale, appressed hairs, in addition to the hair bands, fimbria pale golden brown.

Andrena (Andrena) columbiana new species

Type.—No. 4038, The Academy of Natural Sciences of Philadelphia. *Type locality*.—Mission, British Columbia, Aug. 8, 1904. (R. V. Harvey.)

Related to *A. (A.) colletina* Cockerell, of which it may prove to be a race.

Female.—Length 9.5 mm.; **body** black, mostly covered with pale ochreous hairs; **head** with its facial line : transfacial line :: 54: 70, axial line : temporal line :: 30: 18, malar line : joint 3 of antennae :: 2: 10, ocelloccipital line : greatest diameter of lateral ocellus :: 4: 5, elevated portion of malar space nearly wanting, head covered with pale ochreous hairs, front rather distinctly, longitudinally striate, not elevated into a welt along the fovea, fovea at most : ocellocular line :: 8: 13, foveal band present and at upper end of the inner eye margin : ocellocular line :: 1: 13, distance between fovea and ocelli : ocellocular line :: 4: 13, fovea slightly attenuated below its middle where it is apparently only a little narrower than the greatest width of the fovea and continued to a point apparently a little above the clypeal line, fovea filled with pale ochreous hairs, hair of vertex and temples along the upper edge of the eye concolorous with the facial hairs, face mostly polished, partly indistinctly reticulate, with distinct punctures that are mostly adjoining or one or two puncture widths apart, clypeus slightly elevated above the apical margin, convex, sculptured like the face except that the punctures are larger and closer together, clypearea present, well defined, shiny and finely reticulated, clypeus thinly hairy, its sculpture not at all hidden by hairs, labrarea emarginate on its under surface, its width at base : length down the middle :: 12: 4, width at apex : length down the middle :: 7: 4, its greatest length : width at base :: 5: 12, labrarea at base seemingly a little more than half as wide as the labrum, the latter with a fringe of dark golden hairs, labrum apparently without a definite sculpture or structure between the labrarea and the apical edge of labrum, joint 3 of antennae : 4+5

:: 10: 9, joints 4 and 5 thicker than long, the succeeding joints as thick as long or a little longer than thick, antennae blackish throughout, mandibles typical, robust, extending to the outer edge of the labrarea, black except for the apical half which is dark reddish, palpi nearly typical; **thorax** covered with an abundance of pale ochreous hairs which are as long on the dorsulum where they are darker than the almost whitish hairs on the mesopleura, dorsulum dullish, finely densely reticulated and punctured, the punctures seemingly lost among the dense reticulation, notauli represented by a comparatively smooth dullish line, mesopleura with almost whitish hairs, finely reticulated, somewhat shiny, indistinctly, sparsely punctured, scutel hairy and sculptured much like the dorsulum except that along its anterior edge it is nearly polished, metanotum hairy and densely sculptured, the sculpture nearly hidden by the hairs, tegulae dark brown, reticulated, indistinctly punctured, entirely covered with ochreous hairs, wing base partly blackish brown, subcosta blackish brown, stigma dark stramineous like the costa, rest of veins dull stramineous, with a blackish tinge, first recurrent vein received by the second submarginal cell beyond the middle and a little nearer to the second transverse cubitus than the first transverse cubitus is to the stigma on the radial vein, nervulus received by the median cell and forming an acute angle with the second abscissa of the median vein, membrane uniformly tinged with brown, legs blackish except for the small joints of the tarsi which are more or less pale brown; legs covered with brownish golden and ochreous hairs, scopa typical, its hairs pale ochreous, almost white, hairs at base above decidedly darkened, hind metatarsi at most as wide as the mid metatarsi; **propodeum** with its enclosure poorly defined, fullish and finely reticulated, rest of upper face of propodeum indistinctly densely sculptured and covered with fine pale ochreous hair, propodeal pleura shiny, reticulated, with sparse shallow punctures and almost hidden by the almost white floccus; **abdomen** with its tergum shining, finely reticulated and sparsely punctured, the punctures from two to six or more puncture widths apart on the first tergite, the punctures hardly closer on the succeeding tergites, second, third and fourth tergites with an apical, pale ochreous, complete hair band, apical edge of first, second, third and fourth tergites with a stramineous border, second tergite with its elevated portion down the middle : depressed portion :: 17: 10, fifth tergite shining, reticulate, its punctures partly closer together than on the other tergites, pygidium slightly convex, with a shallow furrow on each side, shiny, finely sculptured, nearly pointed at apex, tergum with inconspicuous, pale, nearly erect hairs in addition to the broad hair bands, the nearly erect hairs of the first and second tergites much longer than the analogous hairs of the succeeding tergites, fimbria dull dark brownish.

Andrena (Andrena) confederata new species

Type.—No. 4072, The Academy of Natural Sciences of Philadelphia. *Type locality*.—Georgia. (H. K. Morrison.)

Related to *A. (A.) perplexa* Smith.

Female.—Length 13 mm.; **body** black, mostly covered with pale ochreous or whitish hairs; **head** with its facial line : transfacial line :: 74: 91, axial line : temporal line :: 37 : 19, malar line : joint 3 of antennae :: 2: 17, ocelloccipital

line : greatest diameter of lateral ocellus :: 8: 5, elevated portion of malar space down the middle apparently shorter than the depressed portion, head mostly covered with pale ochreous hairs, front rather indefinitely reticulato-rugulose, not elevated into a welt along the fovea but divided down the middle by a longitudinal carina, fovea at most : ocellocular line :: 15: 17, foveal band virtually wanting at upper end of the inner eye margin, distance between fovea and ocelli: ocellocular line :: 2: 17, fovea somewhat attenuated below its middle where it is apparently only a little more than half as wide as the greatest width of the fovea, the latter continued to a plane apparently a little below the clypeal line, fovea filled with pale ochreous hairs, fovearea wanting, vertex and front with pale ochreous hairs, rest of head with whitish hairs, face mostly shiny, partly dullish, finely reticulate, with shallow punctures that are mostly from adjoining to three puncture widths apart, clypeus distinctly elevated above the apical margin, convex, shiny, finely reticulated, more deeply punctured than the face, the punctures mostly from one to two puncture widths apart, clypearea represented by a slight elevation down the middle and greater interstices between the punctures down the middle, clypeus thinly hairy, its sculpture not at all hidden by hairs, labrarea subemarginate, its width at base: length down the middle :: 17: 5, width at apex : length down the middle :: 8: 5, greatest length of labrarea slightly in excess of the length down the middle, labrarea at base : distance between lower corners of clypeus :: 17: 29, with a fringe of golden hairs, but without a median longitudinal crista between the labrarea and apical edge of labrum, joint 3 of antennae : 4+5 :: 17: 14, joint 4 a little thicker than long, the succeeding joints from nearly as thick as long to three-fourths as thick as long, except joint 12 which is at least twice as long as thick, antennae blackish except the under side of the flagel which is blackish brown, mandibles typical, robust, extending to the lower corners of the clypeus, black except for most of the apical half which is dark reddish, palpi nearly typical; **thorax** thinly hairy, the hairs on the dorsulum pale ochreous or golden and shorter than the whitish hairs on the mesopleura, dorsulum partly dullish, partly shiny, finely reticulated and punctured much like the clypeus but not so deeply punctured, notauli represented by a dullish line, mesopleura almost ruguloso-punctate and finely reticulate, more closely punctured than the dorsulum, scutel nearly polished, metanotum hairy and densely sculptured, indistinctly punctured and dullish, tegulae brownish stramineous, nearly polished, blackish brown at base, wing base partly blackish brown, partly stramineous, subcosta blackish brown, stigma brownish stramineous, rest of veins concolorous with the stigma, first recurrent vein received by the second submarginal cell beyond the middle and nearly as near to the second transverse cubitus as the first transverse cubitus is to the stigma on the radial vein, nervulus interstitial and forming an acute angle with the first abscissa of the discoidal vein, membrane with a deep brown stain, legs blackish brown except for the small joints of the tarsi which are more or less brownish, legs covered with whitish, golden, and brownish hairs, scopa typical, its hairs of the lower half almost white, of its upper half with a pale golden hue, hairs at base above decidedly darkened, hind metatarsi at most : greatest width of mid metatarsi :: 11: 11; **propodeum** with its enclosure poorly defined, dullish and finely reticulated except its basal

half which is mostly reticulato-rugulose except for its lateral reticulated margins, rest of upper face of propodeum sculptured like the mesopleurae and covered with longer and pale ochreous hair, propodeal pleura finely reticulated, shiny and with sparse shallow punctures from which extend some raised lines in all directions, propodeal floccus pale ochreous; **abdomen** with its tergum shiny, finely reticulated and sparsely punctured, the punctures mostly from two to six puncture widths apart on the first tergite, the punctures sparser and smaller on the succeeding tergites, tergites without conspicuous apical hair band and appearing bare, apical edge of first, second, third, and fourth tergites with a dark brownish stramineous border, second tergite with its elevated portion down the middle : depressed portion :: 26:12, fifth tergite shiny, reticulate, its punctures larger, less definite and not any closer together than on the other tergites, pygidium nearly planate, rounded at apex, tergum with inconspicuous pale appressed hairs, fimbria brownish golden.

Allotype.—No. 4072, The Academy of Natural Sciences of Philadelphia. Georgia. (H. K. Morrison.)

Male.—Length 11 mm.; **body** black, mostly covered with pale ochreous hair; **head** with its facial line : transfacial line :: 61:79, axial line : temporal line :: 34:21, temples rounded nearly trapezoidal, malar line : joint 3 of antennae :: 3:11, elevated portion of malar space down the middle much shorter than the depressed portion, head covered with pale ochreous hairs, front shiny, reticulato-striate, divided by a median longitudinal carina that extends from the anterior ocellus to the supraclypeal area where it ends in a rudimentary spine, ocellocular line : ocellocapital line :: 17:6, face dullish, indistinctly punctured, its punctures from one to three puncture widths apart, clypeus nearly planate, clypeus slightly concave, more shining and more distinctly punctured than the face, its punctures from adjoining to two puncture widths apart, not elevated directly above the apical margin, clypearea wanting, sculpture of the clypeus almost hidden by the moustache, labrarea with a slight broad, shallow emargination, polished, its width at base : greatest length :: 14:5.5, width at apex : length down the middle :: 6:5, labrarea at base : distance between lower corners of clypeus :: 14:22, labrum with a fringe of pale golden hairs, joint 3 of antennae : 4 :: 11:8, joint 4 and following joints from a little more than one and one-half times as long as thick to nearly twice as long as thick, dullish, flagel almost straight in outline, antennae blackish throughout and with stramineous sutures, mandibles nearly typical, rather slender, extending beyond the lower corners of the clypeus and nearly to end of the basal third of its fellow, black except for the apical fourth which is dull dark reddish, palpi nearly typical; **thorax** covered with an abundance of pale dull ochreous hairs, hairs of dorsulum seemingly shorter than hair of mesopleura, dorsulum dullish, finely reticulated and sparsely punctured, the punctures shallow and mostly from two to five puncture widths apart, notauli represented by a shining line, mesopleura dullish with pale ochreous hairs throughout, finely reticulated and mostly covered with shallow adjoining pits, scutel with longer hair than the dorsulum, sculptured somewhat like the dorsulum but

partly almost polished, metanotum hairy and sculptured like the dorsum except that the sculpture is denser and the hairs are as long as on the scutellum, tegulae pale stramineous, shining, delicately reticulated, wing base mostly pale stramineous, subcosta blackish, stigma pale brownish stramineous, first recurrent vein received by the second submarginal cell beyond the middle and a little nearer to the second transverse cubitus than the first transverse cubitus is to the stigma on the radial vein. Nervulus nearly interstitial, forming an acute angle with the first abscissa of the discoidal vein, membrane uniformly rather deeply tinged with brown, legs dark brown excepting the tarsi which are rather brownish stramineous, hind tarsi pale stramineous, legs covered with pale golden hairs, hind metatarsi at most hardly wider than mid metatarsi and nearly half as wide as hind tibiae at apex of the latter; **propodeum** with its enclosure poorly defined, with irregular rugae on basal half, finely reticulated on apical half, rounded off at apex, rest of upper face sculptured much like the mesopleura and covered with pale ochreous hair, propodeal pleura sculptured much like the mesopleura, the sculpture better defined, propodeal scopa pale, **abdomen** with its tergum shining, almost polished, finely reticulated and indistinctly punctured, the punctures mostly three or four puncture widths apart, first and second tergites with erect pale ochreous hairs, second and third tergites with pale ochreous appressed hairs, second tergite with its elevated portion down the middle: depressed portion :: 22: 11, third and fourth tergites with pale ochreous appressed hairs on the elevated portion, fifth tergite with its basal blackish portion covered with poorly defined punctures that are as many as six or more puncture widths apart, rest of fifth tergite and apical margin of sixth tergite with a stramineous margin, anal process broad, almost parallel-sided and slightly emarginate at apex, tergum with rather inconspicuous hairs and without apical hair bands, hair at apex of abdomen of a golden hue.

Other locality.—Potomac Run, Virginia, May 30, 1916, at flowers of *Apocynum medium*. (W. L. McAtee.)

Andrena (Andrena) elongatula new species

Type.—No. 4056, The Academy of Natural Sciences of Philadelphia. *Type locality*.—Southern California. (H. K. Morrison.)

Has characters in common with *A. (A.) subaustralis* Cockerell.

Male.—Length 12 mm.; **body** black, mostly covered with whitish hair; **head** with its facial line : transfacial line :: 48: 83, axial line : temporal line :: 38: 24, temples produced, trapezoidal, the angle apparently opposite middle of eye, malar line : joint 3 of antennae :: 1: 9, elevated portion of malar space virtually wanting, head covered with whitish hairs except along the inner eye margin, upper eye margin, and outer eye margin above middle of temples and on upper half of front where the hairs are black or blackish or dark brown, front indistinctly punctured, dullish, finely longitudinally striate except for the narrow fovea along the upper half of the inner eye margin, ocellocular line : ocelloccipital line :: 19: 7, face shiny, distinctly punctured, its punctures from adjoining to three or four puncture widths apart, clypeus slightly convex

nearly planate, not so shiny or so distinctly punctured as the face, not especially elevated directly above the apical margin, clypearea wanting, sculpture of the clypeus virtually hidden by the moustache, dullish, finely reticulated and with adjoining punctures, labrarea broadly truncate, polished, its width at base : greatest length :: 13: 5, width at apex : length down the middle :: 8: 5, labrarea impressed and at base nearly as wide as the labrum, the latter with a fringe of golden hairs, joint 3 of antennae : 4 : 9: 8, joint 4 with its length : thickness :: 6: 7, joints 5-7 approximately one and one-half times as long as thick, dullish, flagel almost straight in outline, antennae presumably blackish throughout, mandibles nearly typical, rather slender, apparently extending a little beyond the outer edge of the labrum, black except for the apex and inner margin which are dull dark reddish, palpi nearly typical; **thorax** covered with an abundance of whitish hairs, hairs of dorsulum seemingly a little shorter than hair of mesopleura and with an ochreous tinge, dorsulum dullish, finely reticulated and not appreciably punctured, notauli represented by a dullish line, mesopleura dullish with whitish hairs throughout, finely reticulated and with ill-defined punctures that are mostly three or more puncture widths apart, scutel hairy and sculptured like the dorsulum, metanotum hairy and sculptured apparently like the dorsulum, tegulae dark brown, polished, wing base mostly blackish and dark brown, subcosta blackish, stigma yellowing stramineous with a blackish tinge, first recurrent vein received by the second submarginal cell a little before the middle and a little farther from the first transverse cubitus than the first transverse cubitus is from the stigma on the radial vein, nervulus almost exactly interstitial, forming an acute angle with the first abscissa of the discoidal vein, veins dull brownish stramineous, membrane uniformly tinged with brown, legs blackish excepting the tarsi and hind tibiae which are rather blackish brown, legs covered with whitish and golden hairs, hind metatarsi at most hardly wider than mid metatarsi and nearly half as wide as hind tibiae at apex of the latter; **propodeum** with its enclosure rather well defined, with irregular rugae on basal half, finely reticulated on apical half, rounded off at apex, rest of upper face sculptured somewhat like the mesopleura, propodeal pleura sculptured, partly, apparently like the mesopleura, the sculpture nearly hidden by the uniformly distributed whitish hairs; **abdomen** with its tergum shiny, blackish brown, almost polished, finely reticulated and indistinctly punctured, the punctures mostly three or four puncture widths apart, first tergite with erect whitish hairs, second tergite with appressed whitish hairs, second tergite with its elevated portion down the middle : depressed portion :: 20: 6, third and following tergites with brownish appressed hairs on the elevated portion, tergites with a pale brownish stramineous margin, anal process narrow, almost parallel sided and irregularly truncate at apex, tergum with rather inconspicuous hairs that are supplemented on the sides of the third and following tergites by thin golden apical hair bands, hair at apex of abdomen seal brown.

Andrena (Andrena) fuscisignata new species

Type.—No. 4071, The Academy of Natural Sciences of Philadelphia. *Type locality*.—Orono, Maine (No. 32).

Related to *A. (A.) trizonata* (Ashmead.)

Female.—Length 8.5 mm.; **body** black, mostly covered with whitish hairs, **head** with its facial line : transfacial line :: 49: 58, axial line : temporal line :: 23: 13, malar line : joint 3 of antennae :: 2.5: 7.5, ocellocipital line : greatest diameter of lateral ocellus :: 3: 4, elevated portion of malar space nearly as long as depressed portion, head covered with whitish hairs, front rather distinctly, longitudinally striate, not elevated into a welt along the fovea, width of fovea at most : ocellocular line :: 6: 12, foveal band present and at upper end of the inner eye margin : ocellocular line :: 1: 12, distance between fovea and ocelli: ocellocular line :: 4.5: 12, fovea attenuated below its middle where it is a little narrower than the greatest width of the fovea, the latter continued to a plane apparently a little below the antennal line, upper half of fovea mostly filled with pale brownish hairs, lower half with whitish hairs, fovearea wanting, face shiny, finely reticulate, with rather poorly defined punctures that are from adjoining to three punctures widths apart, clypeus distinctly elevated above the apical margin, convex, more distinctly reticulated than the face, with its punctures wider apart and larger than on the face, apical half more shiny than the face and with its anterior margin nearly polished, clypearea wanting, clypeus thinly hairy, its sculpture not at all hidden by hairs, labrarea truncate, its width at base : length down the middle :: 11: 4, width at apex: length down the middle : 3.5 : 4, labrarea at base : distance between lower corners of clypeus :: 11: 16, labrum with a fringe of golden hairs and without a median longitudinal crista between the labrarea and its apical edge, joint 3 of antennae : 4+5 :: 7.5: 7, joints 4 and 5 thicker than long, the succeeding joints from as long as thick to a little longer than thick except joint 12 which is distinctly longer than thick, antennae blackish throughout except the under side of the flagel which is dark brown, mandibles typical, robust, extending to the outer corners of the clypeus, black except for the apical half which is mostly dark reddish, palpi nearly typical; **thorax** covered with an abundance of whitish hairs which are nearly as long on the dorsum as the whitish hairs on the mesopleura, dorsum dullish, finely reticulated and punctured like the face but more distinctly so, notauli represented by a shiny line, mesopleura finely reticulated, more sparsely and less distinctly punctured than the dorsum, scutel hairy and sculptured much like the dorsum, metanotum hairy and densely sculptured, tegulae brownish stramineous, partly polished, wing base partly blackish brown, subcosta blackish brown, stigma reddish, rest of veins dull stramineous, first recurrent vein received by the second submarginal cell before the middle and not as near to the first transverse cubitus as the first transverse cubitus is to the stigma on the radial vein, nervulus interstitial and forming an acute angle with the first abscissa of the discoidal vein, membrane with a uniform yellowish brown tinge, legs blackish brown except for the tarsi which are more or less dark brown, legs covered with whitish and golden hairs, scopa nearly typical, more ample, its hairs whitish, except at base and apex where they are brownish, width of hind metatarsi at most : greatest width of mid metatarsi :: 7: 6; **propodeum** with its enclosure poorly defined, its basal half mostly rugulose, its apical half mostly dullish and finely reticulated, rest of

upper face of propodeum sculptured somewhat like the mesopleura but with more distinct punctures, and covered with finer hair, propodeal pleura with sparse shallow punctures and finely reticulated, propodeal floccus whitish; **abdomen** with its tergum shining and sculptured much like the metapleura except that the reticulation is finer and the punctures more distinct, the punctures mostly from four to six puncture widths apart on the first tergite, the punctures hardly closer on the succeeding tergites, second, third and fourth tergites with a thin apical, whitish hair band, apical edge of first, second, third and fourth tergites with a stramineous border, second tergite with its elevated portion down the middle : depressed portion :: 13: 9, fifth tergite shiny, reticulate, its punctures more apparent than on the other tergites, pygidium nearly pointed at apex, planate, with a median, nearly triangular embossed area, tergum with inconspicuous, pale, nearly erect hairs, in addition to the hair bands, fimbria pale brownish stramineous.

Allotype.—No. 4071, The Academy of Natural Sciences of Philadelphia. New Hampshire. (C. F. Baker No. 1869.)

Male.—Length 8 mm.; **body** black, mostly covered with whitish hair; **head** with its facial line : transfacial line :: 42 : 52, axial line : temporal line :: 22: 12, temples rounded, nearly trapezoidal, malar line : joint 3 of antennae :: 2: 6.5, elevated portion of malar space down its middle shorter than the depressed portion, head covered with whitish hairs except along the inner, outer and upper eye margin, and on most of the clypeus where the hairs are black, front distinctly striato-rugulose, shiny, ocellocular line : ocelloccipital line :: 12: 3, face shiny, distinctly punctured, its punctures from one to three puncture widths apart and partly nearly hidden by the hairs, clypeus nearly convex, barely elevated above the apical margin, more shiny and more distinctly punctured than the face, clypearea wanting, sculpture of the clypeus not hidden by the moustache, labrarea with a shallow rounded emargination, polished, its width at base : greatest length :: 7: 4, width at apex : length down the middle :: 3.5: 3, labrarea at base : distance between lower corners of the clypeus :: 7: 12, labrum with a fringe of golden hairs, joint 3 of antennae : 4 :: 6.5 : 5, joint 4 and following joints from a little longer than thick to twice as long as thick, shiny, flagel undulate in outline, antennae blackish throughout, mandibles atypical, rather robust, extending a little beyond the outer corners of the clypeus and nearly to the end of the basal third of their fellow, black except for the apical third which is mostly dark reddish, palpi nearly typical; **thorax** covered with an abundance of dull pale ochreous or whitish hairs, hairs of dorsulum seemingly shorter than hairs of mesopleura, dorsulum dullish, finely reticulated and sparsely indistinctly punctured, the punctures mostly from one to three puncture widths apart, notauli represented by a shiny line, mesopleura dullish, with whitish and a few blackish hairs throughout, finely reticulated and covered with shallow pits that are mostly two or more pit widths apart, scutel hairy and sculptured like the dorsulum, metanotum hairy and sculptured like the dorsulum, except that the sculpture is denser, tegulae pale stramineous with blackish stains, polished, wing base brownish and pale stramineous,

subcosta dark brown, stigma pale brownish stramineous, first recurrent vein received by the second submarginal cell a little beyond the middle but not as near to the second transverse cubitus as the first transverse cubitus is to the stigma on the radial vein, nervulus interstitial, forming an acute angle with the first abscissa of the discoidal vein, membrane with a uniform yellowish brown tinge, legs blackish brown excepting the small joints of the tarsi which are brownish, legs covered with whitish hairs, hind metatarsi at most hardly wider than middle metatarsi and nearly half as wide as hind tibiae at apex of the latter; **propodeum** with its enclosure poorly defined, with irregular rugae on basal half, finely reticulated on apical half, rounded off at apex, rest of upper face sculptured somewhat like the metanotum and covered with whitish hair, propodeal pleura sculptured apparently like the mesopleura, the sculpture not at all hidden by the uniformly distributed whitish hairs; **abdomen** with its tergum shiny, finely reticulated and indistinctly punctured, the punctures mostly four or more puncture widths apart, first tergite with whitish erect hairs, second and following tergites with appressed whitish hairs, second tergite with its elevated portion down the middle : depressed portion :: 12: 6, fifth tergite with its basal blackish portion covered with poorly defined punctures that are as many as six or more puncture widths apart, fifth, sixth and seventh tergites with a stramineous margin, anal process narrow, pale stramineous, rounded at apex, tergum with rather inconspicuous hairs that are supplemented on the sides of the second, third and fourth tergites by thin whitish apical hair bands, hair at apex of abdomen of a pale golden hue.

Andrena (Andrena) mariposorum new species

Type.—No. 4050, The Academy of Natural Sciences of Philadelphia. *Type locality*.—Southern California. (H. K. Morrison.)

Related to *A. (A.) salicinella* Cockerell, of which it may prove to be a race. Professor Cockerell, who compared the type with a topotypic specimen of *A. (A.) salicinella* Cockerell, says that in *A. (A.) mariposorum* the wings are longer, sculpture of clypeus not the same, etc. He avers that it is possibly a subspecies only.

Female.—Length 8.5 mm.; **body** black, mostly covered with whitish hairs, **head** with its facial line : transfacial line :: 47: 59, axial line : temporal line :: 22: 14, malar line : joint 3 of antennae :: 1: 7, ocellocapital line : greatest diameter of lateral ocellus :: 3: 4.5, elevated portion of malar space virtually wanting, head covered with whitish hairs, front distinctly, longitudinally striate, not elevated into a welt along the fovea, fovea at most : ocellocular line :: 6: 11, foveal band represented at upper end of the inner eye margin by a bevelled, bare space, distance between fovea and ocelli : ocellocular line :: 5: 11, fovea somewhat attenuated below its middle, and continued to a plane apparently half way between the clypeal and antennal line, fovea filled with pale ochreous or golden hairs, fovea wanting, vertex and temples along the

upper edge of the eye with whitish hairs, face brownish, shiny, finely reticulate, with indistinctly defined punctures that are mostly from two to four puncture widths apart, clypeus virtually not at all elevated above the apical margin, nearly planate, brownish and blackish, sculptured like the face except that the punctures are larger and well defined, clypearea present but poorly defined and finely reticulated, clypeus thinly hairy, its sculpture not at all hidden by hairs, labrarea with its anterior margin convex, its width at base : length down the middle :: 10: 3, labrarea at base : distance between lower corners of clypeus :: 10: 17, labrum with a fringe of golden hairs and without a median longitudinal crista between its apical edge and the labrarea, joint 3 of antennae : 4+5 :: 7: 6, joints 4 to 9 inclusive thicker than long, the succeeding joints a little longer than thick except joint 12 which is distinctly longer than thick, antennae brownish except for the blackish scape, mandibles typical, robust, not overlapping, reddish except for the basal fourth which is blackish, palpi nearly typical; **thorax** thinly covered with whitish hairs which are shorter on the dorsulum than the whitish hairs on the mesopleura, dorsulum dullish, finely reticulated and punctured like the face but more distinctly and densely so, notauli represented by a shallow impression, mesopleura sculptured somewhat like the face but more shiny and not so distinctly punctured, scutel hairy and sculptured much like the dorsulum except that the sculpture is not so dense and the surface more shiny, partly almost polished, metanotum hairy and sculptured much like the dorsulum except that the sculpture is denser and indistinct, tegulae brownish stramineous, nearly polished, wing base dull stramineous, subcosta dark brownish stramineous, stigma pale yellowish stramineous, with its lower margin brownish; rest of veins dull stramineous, mostly somewhat paler than the stigma, without a blackish tinge, first recurrent vein received by the second submarginal cell beyond the middle and nearly as near to the second transverse cubitus as the first transverse cubitus is to the stigma on the radial vein, nervulus interstitial and forming an acute angle with the first abscissa of the discoidal vein, membrane uniformly with a dark tinge, nearly colorless, legs dark brown except for the tarsi and hind tibiae which are more or less pale brownish stramineous, legs covered with whitish and pale golden hairs, scopa nearly typical, its hairs whitish throughout, hind metatarsi at most apparently as wide as the middle metatarsi; **propodeum** with its enclosure poorly defined, dullish and finely reticulated except for a nearly radiate network of fine carinae along the basal margin, rest of upper face of propodeum sculptured somewhat like the metanotum and covered with fine whitish hair, propodeal pleura very shiny, delicately reticulated and with a few, very small scattered, shallow punctures and more or less hidden by the whitish floccus; **abdomen** with its tergum shiny, finely reticulated and indistinctly punctured, the punctures from two to four or more puncture widths apart on the first tergite, the punctures not so close on the succeeding tergites, second, third, and fourth tergites with an apical, whitish hair band that is interrupted in the middle of the second, apical edge of first, second, third, and fourth tergites with a stramineous border, second tergite with its elevated portion down the middle : depressed portion :: 11: 8, fifth tergite shiny, reticulate, its punctures more evident than

on the other tergites, pygidium nearly planate, without a shallow furrow on each side, nearly truncate at apex, tergum with inconspicuous, pale appressed hairs in addition to the hair bands, fimbria pale ochreous or pale golden.

Andrena (Andrena) mellitarsis new species

Type.—No. 4057, The Academy of Natural Sciences of Philadelphia. *Type locality*.—Nevada. (H. K. Morrison.)

Related to *A. (A.) thaspiae* Graenicher.

Male.—Length 8.5 mm.; **body** black, mostly covered with whitish hair; **head** with its facial line : transfacial line :: 44: 56, axial line : temporal line :: 23: 13, temples rounded, subtrapezoidal, malar line : joint 3 of antennae :: 2: 7, elevated portion of malar space much shorter than the depressed portion, head covered with whitish hairs except along the inner eye margin, upper eye margin, and outer eye margin above the middle of temples and on upper half of front where the hairs are black, front rather coarsely, indefinitely reticulated and sculptured, partly longitudinally striate, fovea narrow, ocellocular line : ocell-occipital line :: 11: 4, face shiny, distinctly punctured, its punctures from one to three puncture widths apart, clypeus slightly convex, clypeus apparently slightly elevated above apex more shiny and more distinctly coarsely and closely punctured than the face, clypearea wanting, sculpture of the clypeus not hidden by the moustache, labra with a narrow rounded shallow emargination, polished, its width at base : greatest length :: 5: 4, width at apex: length down the middle :: 3.5 : 3, labra at base apparently one-third as wide as the labrum, the latter with a fringe of pale golden hairs, joint 3 of antennae : 4 :: 7: 6, joint 4 as long as thick, the following joints from a little longer than thick to nearly one and one-half times as long as thick, dullish, flagel somewhat undulate in outline, antennae blackish throughout, mandibles atypical, rather slender, extending beyond the outer edge of the labrum and to the end of the basal half of their fellow, black except for the apical third which is dark reddish, palpi nearly typical; **thorax** covered with an abundance of whitish hairs, hairs of dorsulum seemingly shorter than hair of mesopleura, dorsulum dullish, finely reticulated and sparsely punctured, the punctures shallow and from one to five puncture widths apart, mostly two or three puncture widths apart, notauli represented by a shiny line, mesopleura dullish with whitish hairs throughout, finely reticulated and sparsely punctured like the mesonotum but not so obviously, scutel hairy and sculptured much like the dorsulum, metanotum hairy and densely sculptured, not so definitely sculptured as the dorsulum, tegulae dark brown, polished, wing base mostly pale stramineous, partly brownish, subcosta dark brown, rest of veins pale brownish stramineous, stigma stramineous with blackish or dark hairs, first recurrent vein received by the second submarginal cell beyond the middle and a little nearer to the second transverse cubitus than the first transverse cubitus is to the stigma on the radial vein, nervulus received by the median vein, forming an acute angle with the second abscissa of the median vein, membrane with uniformly pale brownish stramineous tinge, legs blackish brown excepting the hind metatarsi which are pale yellowish stramineous, legs covered with whitish hairs, hind metatarsi at most hardly wider than mid metatarsi and nearly half as wide as hind tibiae

at apex of the latter; **propodeum** with its enclosure poorly defined, with irregular, fine rugae along the basal edge, elsewhere finely reticulated, rounded off at apex, rest of upper face sculptured somewhat like the mesopleura and covered with whitish hair, propodeal pleura sculptured like the mesopleura, the sculpture not hidden by the whitish hairs; **abdomen** with its tergum shiny almost polished, finely reticulated and indistinctly punctured, the punctures mostly three or four puncture widths apart, first tergite, with erect whitish hairs, second and third tergites with dark, appressed hairs, second tergite with its elevated portion down the middle : depressed portion :: 15: 5, third, fourth and fifth tergites with brownish appressed hairs on the elevated portion, fifth tergite with its basal blackish portion covered with poorly defined punctures that are as many as four puncture widths apart, rest of fifth tergite and exposed portion of sixth and seventh tergites with a stramineous margin, anal process expanding toward apex and deeply emarginate at apex, tergum with rather inconspicuous hairs that are supplemented on the second, third, fourth and fifth tergites by white, apical hair bands that are more or less interrupted in the middle, hair at apex of abdomen of a golden hue.

Andrena (Andrena) nasoni fulvodorsata new variety

Type.—No. 4059, The Academy of Natural Sciences of Philadelphia. Type locality.—Fedor, Lee Co., Texas, March 22, 1905. (G. Birkmann.)

Female.—Differs from typical *A. (A.) nasoni* Robertson in the hair of the dorsum of the thorax being fulvous.

Andrena (Andrena) omninigra⁵ new species

Type.—No. 4046, The Academy of Natural Sciences of Philadelphia. Type locality.—California. (E. Norton.)

Related to *A. (A.) stictigaster* Viereck.

Female.—Length 15 mm.; **body** black, covered throughout with black or blackish brown hairs; **head** with its facial line : transfacial line :: 79: 93, axial line : temporal line :: 40: 25, malar line : joint 3 of antennae :: 2: 11, ocellocipital line : greatest diameter of lateral ocellus :: 7: 6.5, elevated portion of malar space represented by a shiny line, front distinctly, longitudinally striate, not elevated into a welt along the fovea, fovea at most : ocellocular line :: 14: 18, foveal band represented by a shiny line, distance between fovea and ocelli : ocellocular line :: 4: 18, fovea attenuated below its middle where it is apparently nearly as wide as the greatest width of the fovea, the latter continued to a point apparently on the clypeal line, fovea filled with blackish brown hairs, face mostly polished, not reticulate, with distinct punctures that are as many as three puncture widths apart near the eye margin, where the punctures are larger than near the clypeus where they are adjoining or nearly adjoining, clypeus distinctly elevated above the apical margin, slightly convex, its punctures larger than the largest of the face, well defined and from adjoining to two

⁵ This specific name was proposed for this species by Prof. W. M. Davis.

puncture widths apart, clypearea very narrow but conspicuous, clypeus thinly hairy its sculpture not at all hidden by hairs, labrarea funnel shaped in outline, rounded at apex, its width at base : length down the middle :: 13: 9, width at apex : length down the middle :: 2: 9, labrarea at base a little more than half as wide as the labrum, the latter with a fringe of brownish hairs, labrum with a poorly developed median longitudinal crista between the labrarea and apical edge of labrum and closely punctured, joint 3 of antennae : 4+5 :: 12: 12, joints 4 and 5 thicker than long, the succeeding joints as thick as long except joint 12 which is distinctly longer than thick, antennae blackish brown throughout, mandibles typical, robust, extending near to the outer edge of the labrarea, black except for the apical fourth which is dark reddish, palpi nearly typical; **thorax** with short, stiff, dense and inconspicuous hairs on the dorsulum, mesopleura with long rather sparse hairs, dorsulum dullish, finely, indistinctly reticulated and with distinct, adjoining or nearly adjoining punctures, notauli represented by a shiny line, mesopleura sculptured somewhat like the dorsulum but not so closely punctured, scutell hairy and sculptured much like the dorsulum, metanotum hairy and sculptured like the dorsulum except that the sculpture is denser and less distinct, tegulae dark brown, polished, indistinctly reticulated in part, wing base partly blackish brown, subcosta and stigma blackish brown, rest of veins nearly as dark as the stigma, first recurrent vein received by the second submarginal cell beyond the middle, a little farther from the second transverse cubitus than the first transverse cubitus is to the stigma on the radial vein, nervulus nearly exactly interstitial and forming an acute angle with the first abscissa of the discoidal vein, membrane uniformly deep brown, legs blackish except for the tarsi which are more or less dark brown, legs covered with brownish and black hairs, scopa atypical, its hairs black throughout, nearly erect and mostly apparently longer than the greatest width of hind tibiae; **propodeum** with its enclosure well defined, shiny, indistinctly rugulose and with irregular coarse rugae on each side of a median longitudinal carina, rest of upper face of propodeum coarsely reticulated, and covered with fine long hair, propodeal pleura finely reticulated, with sparse shallow pits and not almost hidden by the floccus; **abdomen** with its tergum shiny and sculptured much like the clypeus but with smaller more sharply defined punctures, the punctures from nearly adjoining to three puncture widths apart on the first tergite, the punctures not closer on the succeeding tergites, second, third and fourth tergites without an apical hair band, apical edge of first, second, third and fourth tergites concolorous with the rest of the blackish brown tergite, second tergite with its elevated portion down the middle : depressed portion :: 24: 13, fifth tergite shiny, reticulate, its punctures not so clearly defined as on the other tergites, pygidium nearly planate, with a shallow furrow on each side, nearly pointed at apex, tergum with inconspicuous appressed black hairs, fimbria black.

Andrena (Andrena) perezana thaspiiformis new race

Type.—No. 4052, The Academy of Natural Sciences of Philadelphia. *Type locality*.—Southern California. (H. K. Morrison.)

Female.—Differs from typical *A. (A.) perezana* Viereck and Cockerell chiefly as follows:—Pubescence ochreous to fulvous, foveal hairs bicolored, longest hairs of the labrum nearly as long as the labrum down the middle, clypearea virtually wanting, clypeus more coarsely, not so closely punctured, dorsulum not at all polished, hind tibiae mostly stramineous, partly dark, fimbria fulvous.

Andrena (Andrena) tincta⁶ new species

Type.—No. 4066, The Academy of Natural Sciences of Philadelphia. Type locality.—Georgetown, Colorado. July 8. (Packard.)

Related to *A. (A.) subtilis* Smith.

Female.—Length 10 mm.; **body** black, mostly covered with pale ochreous hairs; **head** with its facial line : transfacial line :: 59: 71, axial line : temporal line :: 30: 19, malar line : joint 3 of antennae :: 3: 10, ocelloccipital line : greatest diameter of lateral ocellus :: 3: 5, elevated portion of malar space nearly as long as the depressed portion, head partly covered with whitish hairs, front rather distinctly, longitudinally striate, not elevated into a welt along the fovea, fovea at most : ocellocular line :: 11: 14, foveal band virtually wanting at upper end of the inner eye margin, distance between fovea and ocelli : ocellocular line :: 2: 14, fovea attenuated below its middle and continued to a plane apparently a little above the clypeal line, fovea filled with brownish golden hairs, fovearea wanting, vertex and temples along the upper edge of the eye with dark brown or blackish hairs, face partly polished, mostly finely reticulate, with distinct punctures that are as many as four puncture widths apart, clypeus distinctly elevated above the apical margin, convex, mostly polished, otherwise sculptured like the face except that the punctures are larger and better defined and from one to ten puncture widths apart, clypearea present but poorly defined, clypeus thinly hairy, its sculpture not at all hidden by hairs, labrarea truncate, its width at base : length down the middle :: 10: 4, width at apex : length down the middle :: 8: 4, labrarea at base : distance between the lower angles of the clypeus :: 10: 20, labrum with a fringe of golden hairs, labrum apparently without a median longitudinal crista between the labrarea and apical edge of labrum, joint 3 of antennae : 4+5 :: 10: 10, joint 4 a little thicker than long, the succeeding joints from as thick as long to a little longer than thick except joint 12 which is distinctly longer than thick, antennae dark brownish throughout, mandibles typical, robust, extending to the outer edge of the labrarea, black except for the apical third which is mostly dark reddish, palpi nearly typical; **thorax** covered with an abundance of pale ochreous hairs which are shorter on the dorsulum than on the mesopleura, dorsulum dullish, finely, densely reticulated and indistinctly punctured, notauli represented by a shiny line, mesopleura sculptured somewhat like the dorsulum but not so dull, scutellum shiny, hairy and sculptured much like the dorsulum but not so densely, metanotum sculptured like the dorsulum but with longer hairs, tegulae dark brownish stramineous, polished, wing base brownish stramineous, subcosta blackish

⁶ This name was proposed for this species by Prof. W. M. Davis.

brown, stigma yellowish brown, rest of veins dull stramineous, first recurrent vein received by the second submarginal cell beyond the middle and distinctly nearer to the second transverse cubitus than the first transverse cubitus is to the stigma on the radial vein, nervulus not interstitial and forming an acute angle with the second abscissa of the median vein, membrane with a uniformly yellowish-brown tinge, legs blackish brown except for the tarsi which are more or less pale brown, femora partly covered with ochreous hairs, rest of legs except coxae and trochanters covered with brownish golden hairs, scopa atypical, its hairs shorter than the greatest width of hind tibiae, compactly arranged and uniformly dark brown, hind metatarsi at most as wide as mid metatarsi or :: 12: 12; **propodeum** with its enclosure poorly defined, dullish and finely reticulated, rest of upper face of propodeum sculptured like the mesopleura but with smaller punctures, and covered with finer pale ochreous hair, propodeal pleura with sparse shallow punctures, propodeal floccus pale ochreous; **abdomen** with its tergum shiny, finely reticulated and finely punctured, the punctures mostly from two to six puncture widths apart on the first tergite, the punctures hardly closer on the succeeding tergites, conspicuous hair bands wanting, apical edge of first, second, third, and fourth tergites with a stramineous border, second tergite with its elevated portion down the middle : depressed portion :: 15: 12, fifth tergite shiny, reticulate, its punctures coarser and closer together than on the other tergites, pygidium convex, without a shallow furrow on each side, truncate at apex, tergum with inconspicuous, pale nearly erect hairs on the first and second segments and mostly blackish nearly appressed hairs on the succeeding tergites, fimbria dark seal brown.

Other locality.—Longview, Colorado. June 24, 1916. (E. C. Jackson.)

Andrena (Andrena) trivialis new species

Type.—No. 4055, The Academy of Natural Sciences of Philadelphia. *Type locality*.—Southern California. (H. K. Morrison.)

Related to *A. (A.) illinoensis* Robertson.

Female.—Length 8.5 mm.; **body** black, with the head and abdomen barely tinged with green, mostly covered with whitish hairs, **head** with its facial line : transfacial line :: 45: 64, axial line : temporal line :: 27: 15, malar line : joint 3 of antennae :: 2: 8, ocellocipital line : greatest diameter of lateral ocellus :: 4: 4, elevated portion of malar space nearly as long as depressed portion, head covered with whitish hairs, front rather distinctly, longitudinally striate, not elevated into a welt along the fovea, fovea at most : ocellocular line :: 7: 14, foveal band present and at upper end of the inner eye margin: ocellocular line : 1.5 : 14, distance between fovea and ocelli : ocellocular line :: 7: 14, fovea attenuated below its middle where it is apparently only one-half or a little more than half as wide as the greatest width of the fovea, the latter continued to a point apparently on the antennal line, fovea filled with dark seal brown hairs except along the lower edge where the hairs are pale, vertex and temples along

the upper edge of the eye with some dark hairs, face mostly dullish, finely, distinctly reticulate, with rather ill-defined punctures that are as many as three puncture widths apart, clypeus distinctly elevated above the apical margin, slightly convex, sculptured like the face except that the punctures are better defined and not so close together, clypearea present but poorly defined, clypeus thinly hairy, its sculpture not at all hidden by hairs, labrarea subemarginate, its width at base : length down the middle :: 9: 2.5, width at apex : length down the middle :: 5.5: 2.5, greatest length : width at base :: 3: 9, labrarea at base apparently a little more than half as wide as the labrum, the latter with a fringe of golden hairs, labrum without definite sculpture or structure between the labrarea and apical edge of labrum, joint 3 of antennae : 4+5 :: 8: 7, joints 4 and 5 thicker than long, the succeeding joints as thick as long or a little longer than thick except joint 12 which is distinctly longer than thick, antennae blackish throughout, mandibles typical, robust, extending nearly to the outer edge of the labrarea, black except for the apical third which is mostly dark reddish, palpi nearly typical; **thorax** thinly covered with whitish hairs which are as long on the dorsulum as the almost white hairs on the mesopleura, dorsulum dullish, finely reticulated, indistinctly punctured, the punctures sparser than on the clypeus, notauli represented by a shiny line, mesopleura sculptured somewhat like the dorsulum but more closely punctured, the punctures crater-like, scutel hairy and sculptured much like the dorsulum, metanotum hairy and sculptured like the dorsulum except that the sculpture is denser and less distinct, tegulae dark brown, polished, wing base partly blackish brown, subcosta blackish brown, stigma pale brownish stramineous, rest of veins dull stramineous, with a blackish tinge, first recurrent vein received by the second submarginal cell in or a little beyond the middle and nearly as near to the second transverse cubitus as the first transverse cubitus is to the stigma on the radial vein, nervulus interstitial and forming an acute angle with the first abscissa of the discoidal vein, membrane uniformly tinged with brown, legs blackish except for the tarsi which are more or less light brown, legs covered with whitish and golden brown hairs, scopa atypical, its hairs whitish and brownish, at most apparently shorter than the greatest width of hind tibiae, mostly nearly erect not hiding the tegument, hairs at base above decidedly darkened, hind metatarsi at most apparently a little wider than middle metatarsi, more than half as wide as hind tibiae at apex; **propodeum** with its enclosure poorly defined, dullish and finely reticulated, rest of upper face of propodeum sculptured somewhat like the enclosure, apparently more finely, and covered with whitish hair, propodeal pleura with a few sparse, shallow, crater-like punctures, finely reticulated, shiny, and almost hidden by the almost white floccus; **abdomen** with its tergum shiny, finely reticulated and almost impunctate, the indistinct punctures from two to six or more puncture widths apart on the first tergite, the punctures apparently sparser on the succeeding tergites, second, third and fourth tergites with an apical, whitish hair band that is interrupted in the middle, apical edge of first, second, third and fourth tergites with a stramineous border, second tergite with its elevated portion down the middle : depressed portion :: 15: 6, fifth tergite shiny, reticulate, its punctures distinct and

apparently closer together than on the other tergites, pygidium slightly convex, apparently without a shallow furrow on each side, nearly pointed at apex, black, tergum with inconspicuous pale nearly erect hairs in addition to the hair bands, fimbria dull pale brownish or whitish with a brownish tinge.

Andrena (Gonandrena) persimulata⁷ new subgenus, new species

Type.—No. 4069, The Academy of Natural Sciences of Philadelphia. *Type locality*.—Milwaukee, Wisconsin. June 5, No. 15. (S. Graenicher.)

Ignoring the mesopleura, this species is related to *A. (P.) pallidifovea* Viereck. Superficially it is like *A. (A.) barbarica* Viereck.

Female.—Length 9 mm.; **body** black, mostly covered with pale ochreous or whitish hairs; **head** with its facial line : transfacial line :: 50: 61, axial line: temporal line :: 26: 16, malar line : joint 3 of antennae :: 1.5: 8, ocellocipital line : greatest diameter of lateral ocellus :: 4: 4, elevated portion of malar space virtually wanting, head covered with whitish hairs, front rather indistinctly, longitudinally striate, not elevated into a welt along the fovea, fovea at most : ocellocular line :: 5: 10, foveal band present and near upper end of the inner eye margin : ocellocular line :: 1.5: 10, distance between fovea and ocelli : ocellocular line :: 4.5: 10, fovea slightly attenuated below its middle and continued to a place apparently on the clypeal line, fovea filled with pale ochreous hairs, fovearea wanting, face partly polished, mostly indistinctly reticulate, with distinct punctures that are as many as five or more puncture widths apart, through mostly one to three puncture widths apart, clypeus not elevated above the apical margin, which latter is somewhat turned up, clypeus convex, finely reticulated and distinctly punctured, the punctures mostly from two to four puncture widths apart, clypearea wanting, clypeus thinly hairy, its sculpture not at all hidden by hairs, labrarea nearly quadrate, but rounded off at apex, its width at base : length down the middle :: 7: 5, width at apex : length down the middle :: 5: 5, distance between lower angles of clypeus : width of labrum at base :: 16: 7, labrum with a fringe of golden hairs and without a median longitudinal crista between the labrarea and the apical edge of the labrum, joint 3 of antennae : 4+5 :: 8: 7, joints 4 and 5 much thicker than long, the succeeding joints from a little thicker than long to a little longer than thick except joint 12 which is nearly twice as long as thick, antennae blackish above, blackish brown beneath, mandibles typical, robust, extending almost to the lower corners of the clypeus, black except for the apical half which is mostly dark reddish, palpi nearly typical; **thorax** covered with an abundance of pale hairs which are shorter on the dorsulum where they are ochreous than the whitish hairs on the mesopleura, dorsulum dullish, reticulated and punctured like the clypeus but more distinctly so, notauli represented by a shiny line, mesopleura almost conically produced at the anterior inferior corner, finely reticulate and indistinctly punctured, scutel hairy and punctured much like

⁷ This species was doubtfully referred to *A. simulata* Provancher by Dr. Graenicher.

the dorsulum, indistinctly reticulate, nearly polished and with coarser, longer hairs, metanotum hairy like the scutel and densely sculptured, tegulae brownish stramineous, partly polished, wing base partly blackish brown, subcosta brownish stramineous, stigma yellowish stramineous, rest of veins concolorous with the stigma, first recurrent vein received by the second submarginal cell far beyond the middle and almost interstitial with the second transverse cubitus, nervulus not interstitial but received by the median cell and forming an acute angle with the second abscissa of the median vein, membrane with a uniformly yellowish tinge, legs blackish except for the femora and fore and middle tibiae, which are very dark brown, and the tarsi and hind tibiae, which are more or less paler brown than the femora, legs covered with brownish golden and ochreous hairs, scopa nearly typical except for having most of its hairs branched, its hairs pale ochreous except at base above where they are darkened, hind metatarsi at most apparently as wide as the mid metatarsi; **propodeum** with its enclosure rather poorly defined, shiny and coarsely wrinkled, rest of upper face of propodeum wrinkled but much more finely than the enclosure, and covered with fine pale ochreous hair, propodeal pleura finely reticulated and loosely wrinkled, with sparse indistinct shallow punctures, propodeal floccus thin and pale ochreous; **abdomen** with its tergum shiny and nearly polished, the punctures mostly from four to six puncture widths apart on the first tergite, the punctures apparently twice or more than twice as close together on the succeeding tergites, second, third and fourth tergites with an apical, whitish hair band that is interrupted in the middle of the second and third, apical edge of first, second, third, and fourth tergites with a brownish border, second tergite with its elevated portion down the middle : depressed portion :: 14: 9, fifth tergite shiny, reticulate, its punctures coarser than on the other tergites and apparently as sparse as on the first tergite, pygidium narrowly truncate at apex with a broad shallow furrow on each side of an acute-angled, embossed, sculptured area, tergum with inconspicuous pale appressed hairs, in addition to the hair bands, fimbria dark golden.

Other locality.—Montreal Isl., Quebec. May 21, 1904. (Baker No. 4769.) In this specimen the labrarea is larger than in the type.

Andrena (Parandrena) parachalybea new species

Type.—No. 4054, The Academy of Natural Sciences of Philadelphia. *Type locality*.—Southern California. (H. K. Morrison.)

Related to *A. (P.) olivacea* Viereck.

Female.—Length 10 mm.; **body** bluish, mostly covered with whitish hairs; **head** with its facial line : transfacial line :: 59: 76, axial line : temporal line :: 31: 20, malar line : joint 3 of antennae :: 2: 10, ocellocipital line : greatest diameter of lateral ocellus :: 3.5: 5.5, elevated portion of malar space nearly as long as depressed portion, head mostly covered with whitish hairs, front distinctly, longitudinally reticulate striate, not elevated into a welt along the

fovea, fovea at most : ocellocular line :: 10: 14, foveal band virtually wanting at upper end of the inner eye margin, distance between fovea and ocelli : ocellocular line :: 4: 14, fovea hardly attenuated below its middle where it is apparently nearly as wide as the greatest width of the fovea, the latter continued to a point apparently half-way between the clypeal line and the antennal line, fovea with the upper two-thirds filled with pale cocoa brown hairs, the lower third with white hairs, vertex and temples along the upper edge of the eye with brownish or black hairs, face mostly shiny, partly indistinctly reticulate, with shallow punctures that are from adjoining to as many as three puncture widths apart, foveae with some long brownish hairs, clypeus slightly elevated above the apical margin, convex, sculptured like the face except that the surface is somewhat rippled and the punctures are more pit-like and not adjoining but from one to two puncture widths apart, clypearea wanting, clypeus thinly hairy, its sculpture not at all hidden by hairs, labrarea emarginate, its width at base : length down the middle :: 11: 6, width at apex: length down the middle :: 3: 6, greatest length : length down the middle :: 7: 6, labrarea at base nearly half as wide as the labrum, basal half of labrarea with sloping sides, apical half with parallel sides, labrum with a fringe of golden hairs, labrum without structure or definite sculpture between the labrarea and apical edge of labrum, joint 3 of antennae : 4+5 :: 10: 8, joints 4 and 5 thicker than long, the succeeding joints as thick as long or little longer than thick, except joint 12 which is distinctly longer than thick, antennae blackish throughout, mandibles typical, robust, extending beyond the outer edge of the labrum, black except for the apical half which is mostly dark reddish, palpi typical; **thorax** covered with an abundance of pale whitish hairs which are nearly as long on the dorsulum where they are darker than the almost white hairs on the mesopleura, dorsulum dullish, coarsely reticulated, notauli represented by a shining line, mesopleura sculptured like the dorsulum but more coarsely, scutel hairy and sculptured much like the dorsulum, metanotum hairy and sculptured like the dorsulum except that the sculpture is denser and less distinct, tegulae dark brown, polished, wing base partly blackish brown, subcosta blackish brown, stigma dark brown, rest of veins dull stramineous, with a blackish tinge, first recurrent vein received by the second submarginal cell a little farther from the first transverse cubitus than the first transverse cubitus is long, nervulus not interstitial, received by the median cell and forming an acute angle with the second abscissa of the median vein, membrane uniformly tinged with brown, legs brownish or blackish brown, covered with brownish golden and whitish hairs, scopa nearly typical, loose, its hairs of the lower two-thirds whitish, almost white, of its upper third with a brownish hue, hairs at base above decidedly darkened, hind metatarsi at most apparently a little narrower than mid metatarsi; **propodeum** with its enclosure poorly defined, shiny and sculptured by means of crooked rugae and a median longitudinal carina, rest of upper face of propodeum sculptured somewhat like the dorsulum but with smaller meshes, and covered with nearly white hair, propodeal pleura with sparse shallow punctures, finely reticulate and not hidden by the almost white floccus; **abdomen** with its tergum shiny except the dullish tergite, punctured and finely reticulated, the punctures from two to four puncture widths apart on the first tergite

and set off by a rim to each puncture, the punctures closer on the succeeding tergites and not rimmed, second, third and fourth tergites without hair bands, apical edge of first, second, third and fourth tergites with a brownish stramineous border, second tergite with its elevated portion down the middle : depressed portion :: 17: 9, fifth tergite indistinctly reticulate, its punctures more distinct than on the other tergites, pygidium black, nearly planate, nearly truncate at apex, tergum with inconspicuous, nearly erect, whitish hairs, fimbria brownish.

Andrena (Ptillandrena) biscutellata new species

Type.—No. 4067, The Academy of Natural Sciences of Philadelphia. *Type locality*.—Fedor, Lee County, Texas. April 1, 1902. (G. Birkmann.)

Related to *A. (P.) haynesii* Viereck and Cockerell.

Female.—Length 15 mm.; **body** black, mostly covered with pale ochreous and almost white hairs; **head** with its facial line : transfacial line :: 73: 96, axial line : temporal line :: 40: 26, malar line : joint 3 of antennae :: 3: 12, elevated portion of malar space virtually wanting, ocellocapital line : greatest diameter of lateral ocellus :: 8: 5, head covered with whitish hairs, front striatopunctate, not elevated into a welt along the fovea, fovea at most : ocellocular line :: 13: 19, foveal band present and at upper end of the inner eye margin : ocellocular line :: 2: 19, distance between fovea and ocelli : ocellocular line :: 4: 19, fovea attenuated below its middle where it is apparently only a little narrower than the greatest width of the fovea, the latter continued to a plane apparently a little below the antennal line, fovea filled with very pale ochreous, almost white, hairs, fovearea wanting, face mostly polished or almost polished, partly indistinctly reticulate, with shallow ill-defined punctures that are mostly from adjoining to two puncture widths apart, clypeus distinctly elevated above the apical margin, convex, with better defined punctures than on the face, the punctures mostly from one to two puncture widths apart, clypearea barely indicated, clypeus thickly hairy on each side of the clypearea, its sculpture almost hidden by the hairs, labrarea deeply almost triangularly emarginate, its width at base : its greatest length :: 15: 5, distance between lower corners : length down the middle :: 4.5: 3, distance between lower corners of clypeus : width of labrarea at base :: 25: 15, labrum with a fringe of pale golden hairs, labrum apparently without a median longitudinal crista between the labrarea and apical edge of labrum, joint 3 of antennae : 4+5 :: 12: 9, joints 4 and 5 thicker than long, the succeeding joints from a little thicker than long to a little longer than thick except joint 12 which is distinctly longer than thick, antennae blackish to castaneous throughout, mandibles typical, robust, extending to beyond lower corners of the clypeus, dark castaneous except for a subapical blackish stain, palpi nearly typical; **thorax** covered with an abundance of whitish hairs, except on the dorsulum where the hairs are dark ochreous or nearly fulvous, the hairs on the dorsulum so densely plumose and close together as to conceal the sculpture, and apparently not more than one-third as long as the whitish hairs on the mesopleura, dorsulum where denuded,

shiny, finely indistinctly reticulated and finely, closely punctured, the punctures mostly adjoining or nearly adjoining, notauli represented by a shiny line, mesopleura punctured and finely reticulated, the punctures mostly two to four puncture widths apart, scutell nearly bare and almost polished, finely, indistinctly punctured, metanotum thinly hairy and not much more sculptured than the scutell, tegulae mostly brownish stramineous, partly polished, wing base brownish stramineous, partly with a blackish tinge, subcosta black, stigma dull stramineous with its lower boundary blackish, rest of veins dull stramineous, first recurrent vein received by the second submarginal cell before the middle and as near or nearly as near to the first transverse cubitus as the first transverse cubitus is to the stigma on the radial vein, nervulus almost interstitial and forming an acute angle with the first abscissa of the discoidal vein, membrane uniformly tinged with brown, legs blackish except for the tarsi which are more or less dark brown, legs covered with whitish or pale golden hairs, scopa atypical, its hairs very plumose, pale ochreous and so densely arranged as to nearly hide the tegument, hairs at base above not appreciably darkened, greatest width of hind metatarsi : greatest width of middle metatarsi :: 15: 19; **propodeum** with its enclosure poorly defined, shiny and finely reticulated, except in the middle at base where it is somewhat wrinkled, rest of upper face of propodeum sculptured somewhat like the mesopleura but more densely, and covered with finer whitish hair, propodeal pleura shiny, with sparse shallow punctures and finely reticulated, propodeal floccus whitish; **abdomen** with its tergum shiny almost polished and punctured, the punctures fine and mostly from four to eight puncture widths apart on the first tergite, the punctures a little larger and much closer on the succeeding tergites, first, second, third, and fourth tergites with an apical, whitish hair band that is interrupted in the middle of the first, apical edge of first, second, third, and fourth tergites with a broad pale stramineous border, second tergite with its elevated portion down the middle : depressed portion :: 20: 15, fifth tergite dullish, reticulate, its punctures closer together and coarser than on the other tergites, pygidium nearly planate, rather coarsely sculptured, rounded at apex and with converging sides, tergum with inconspicuous, pale, nearly appressed hairs in addition to the hair bands, fimbria pale, dull, golden on the fifth tergite, bright yellowish golden on each side of the pygidium.

Andrena (Ptilandrena) determinata⁸ new species

Type.—No. 4070, The Academy of Natural Science of Philadelphia. *Type locality*.—North Andover, Massachusetts, August 18, 1865. (J. H. Emerton.)

Related to *A. (P.) biscutellata* Viereck.

Female.—Length 9.5 mm.; **body** black, mostly covered with whitish hairs; **head** with its facial line : transfacial line :: 46: 62, axial line : temporal line :: 25: 14, malar line : joint 3 of antennae :: 1: 8, ocellocipital line : greatest diameter of lateral ocellus :: 6: 4, elevated portion of malar space virtually wanting, head covered with whitish hairs, front elevated medially, rather

⁸ This specific name was proposed for this species by Prof. W. M. Davis.

indistinctly, longitudinally striate and distinctly punctured, not elevated into a welt along the fovea, fovea at most : ocellocular line :: 9:13, foveal band virtually wanting at upper end of the inner eye margin, distance between fovea and ocelli : ocellocular line :: 3:13, fovea somewhat attenuated below its middle and continued to a plane apparently a little below the antennal line, fovea filled with dull whitish, almost ochreous hairs, fovearea wanting, face shiny, indistinctly reticulate, with distinct punctures that are mostly from one to three or four puncture widths apart, clypeus distinctly elevated above the apical margin, convex, sculptured like the face except that the punctures are larger and mostly from two to six puncture widths apart, clypearea present but poorly defined, clypeus thinly hairy its sculpture not at all hidden by hairs labrarea deeply triangularly emarginate, its width at base : length down the middle :: 5:2, width at apex : length down the middle :: 3.5:2, greatest length : width at base :: 4:5, distance between lower angles of clypeus : width of labrarea at base :: 18:5, labrum with a fringe of golden hairs and without a median longitudinal crista between its apical edge and the labrarea, joint 3 of antennae : 4+5 :: 8:5, joints 4 and 5 much thicker than long, the succeeding joints from a little thicker than long to as long as thick except joint 12 which is distinctly longer than thick, antennae very dark blackish brown throughout, mandibles typical, robust, extending to beyond the corners of the clypeus, blackish brown except for the apical half which is reddish brown, palpi nearly typical; **thorax** thinly covered with almost white hairs which are shorter on the dorsulum than on the mesopleura, dorsulum shiny, sculptured much like the clypeus, but not so shiny, notauli represented by a shiny line, mesopleura sculptured somewhat like the dorsulum but not so distinctly punctured and with a loose network of carinae, scutellum hairy and sculptured much like the dorsulum, metanotum hairy and sculptured like the dorsulum except that the sculpture is denser and less distinct, tegulae dark brownish stramineous, shiny and finely reticulated, wing base partly blackish brown, subcosta blackish brown, stigma pale brownish stramineous with a dark brown margin, rest of veins dull brownish stramineous, first recurrent vein received by the second submarginal cell a little before the middle and nearly as near to the first transverse cubitus as the first transverse cubitus is to the stigma on the radial vein, nervulus almost exactly interstitial and forming an acute angle with the first abscissa of the discoidal vein, membrane with a uniform brownish tinge, legs dark brown except for the small joints of the tarsi which are more or less dark stramineous, legs covered with golden and whitish hairs, scopa atypical, its hairs branched and forming a brush so dense as to almost obscure the tegument, its hairs golden except at base above where they are decidedly darkened, hind metatarsi at most : mid metatarsi :: 8:9.5; **propodeum** with its enclosure poorly defined, dullish and very finely reticulated and with an indistinct network of carinae at base, rest of upper face of propodeum sculptured somewhat like the mesopleura, and covered with finer whitish hair, propodeal pleura shiny, finely reticulated and with sparse shallow punctures, the propodeal floccus whitish; **abdomen** with its tergum dullish finely sculptured and sparsely punctured, the punctures mostly from two to six puncture widths apart on the first tergite, the punctures closer on the succeeding tergites, first, second, third, and fourth tergites with

an apical, whitish hair band, apical edge of first, second, third, and fourth tergites with a stramineous border, second tergite with its elevated portion down the middle : depressed portion :: 15:9, fifth tergite shining, reticulate, its punctures coarser but not as close together as on the preceding tergite, pygidium nearly planate, slightly elevated down the middle, turned up along the edge and nearly pointed at apex, tergum with inconspicuous, pale and dark appressed hairs in addition to the hair bands, fimbria golden brown.

Andrena (Ptilandrena) tonkaworum new species

1904. *Andrena melliventris* Howard, The Insect Book, pl. IV, fig. 3.

Type.—No. 4074, The Academy of Natural Sciences of Philadelphia. *Type locality*.—Texas. (No. 220, Belfrage.)

Related to *A. (P.) nivaloides* Graenicher.

Female.—Length 12.5 mm.; **body** black, mostly covered with pale ochreous, almost white hairs; **head** with its facial line : transfacial line :: 70:88, axial line : temporal line :: 37:20, malar line: joint 3 of antennae :: 2:12, ocellocipital line : greatest diameter of lateral ocellus :: 9:6, elevated portion of malar space virtually wanting, head covered with pale ochreous, almost white, hairs, front dullish, finely reticulated and closely punctured, not elevated into a welt along the fovea, fovea at most : ocellocular line :: 11:16, foveal band virtually wanting, distance between fovea and ocelli : ocellocular line :: 4:16, fovea hardly attenuated below its middle and continued to a plane distinctly above the antennal line, fovea filled with pale ochreous hairs, fovearea wanting, face shiny, finely reticulate and with shallow punctures that are as many as four puncture widths apart, clypeus slightly elevated above the apical margin, convex, sculptured like the face except that the punctures are larger and better defined, clypearea present but poorly defined, clypeus thinly hairy, its sculpture not at all hidden by hairs, labrarea triangularly emarginate, its width at base : length down the middle :: 15:4, width at apex : length down the middle :: 5:4, greatest length : length down the middle :: 6:4, labrarea at base : distance between lower corners of clypeus :: 15:25, labrum with a fringe of golden hairs, labrum without a median longitudinal crista between the labrarea and apical edge of labrum, joint 3 of antennae : 4+5 :: 12:8, joints 4 to 9 thicker than long, the succeeding joints as thick as long or a little longer than thick except joint 12 which is apparently one and one-half times as long as thick, antennae dark brown to blackish throughout, mandibles typical, robust, extending to beyond the lower corners of the clypeus, black except for the apex and middle which are dark reddish, palpi nearly typical; **thorax** having dorsulum covered with an abundance of ochreous, almost fulvous hairs, which are shorter than the almost whitish hairs on the mesopleura, dorsulum dullish, finely reticulated and punctured like the face but more distinctly so, notauli represented by a shiny line, mesopleura sculptured somewhat like the dorsulum, scutel hairy and sculptured much like the dorsulum, metanotum hairy and sculptured like the dorsulum except that the hairs are paler, tegulae pale stramineous, polished, wing base partly brownish, subcosta blackish brown, stigma pale stramineous, rest of veins paler stramineous, first recurrent vein received by the second submarginal cell before the middle and as near to the

first transverse cubitus as the first transverse cubitus is to the stigma on the radial vein, nervulus interstitial and forming an acute angle with the first abscissa of the discoidal vein, membrane with a uniform yellowish tinge, legs brownish to blackish brown and covered with brownish golden and ochreous hairs, scopa atypical, its hairs branched, pale ochreous and forming a dense brush, hind metatarsi at most apparently as wide as the middle metatarsi; **propodeum** with its enclosure poorly defined, dullish and finely reticulated, rest of upper face of propodeum sculptured somewhat like the mesopleura but with less distinct punctures, and covered with finer pale ochreous hair, propodeal pleura with a few shallow punctures, propodeal floccus pale golden; **abdomen** with its tergum shiny and sculptured much like the face, the punctures mostly from two to six puncture widths apart on the first tergite, the punctures hardly closer on the succeeding tergites, tergites with an apical, almost whitish stramineous margin, second, third and fourth tergites with an apical pale golden hair band, second tergite with its elevated portion down the middle : depressed portion :: 29:12, fifth tergite shiny, reticulate, its punctures coarser and closer together than on the other tergites, pygidium nearly planate, without a shallow furrow on each side, nearly truncate at apex, tergum with inconspicuous, pale, nearly erect hairs in addition to the hair bands, fimbria bright golden.

Andrena (Ptilandrena) yaquiorum new species

Type.—No. 4053, The Academy of Natural Sciences of Philadelphia. *Type locality*.—Mexico. (No further data.)

Related to *A. (P.) erigenoides* Viereck.

Male.—Length 7.5 mm.; **body** black, mostly covered with white hair; **head** with its facial line : transfacial line :: 49:59, axial line : temporal line :: 24:13, temples trapezoidal, almost rounded, malar space virtually crowded out between the eye and the base of the mandibles, head covered with white hairs except along the inner eye margin, upper eye margin, and outer eye margin above the middle of temples and on front where the hairs are black, front striato-punctuate, shiny, ocellocular line : ocelloccipital line :: 11:4, face polished, distinctly punctured, its punctures from one to three puncture widths apart, clypeus nearly planate, clypeus apparently slightly convex near apex, polished, and more sparsely punctured than the face, not much elevated directly above the apical margin, clypearea virtually wanting, sculpture of the clypeus not hidden by the moustache, labrarea with a broad rounded emargination, polished, its width at base : greatest length :: 8:4, width at apex : length down the middle :: 4:3, labrarea at base nearly half as wide as the labrum, the latter with a fringe of brownish golden hairs, joint 3 of antennae : 4 :: 6:4, joint 4 a little thicker than long, joint 5 as long as thick, joints 6 to 11 inclusive a little longer than thick, the end joint nearly twice as long as thick, antennae dullish, flagel almost straight in outline, antennae blackish brown throughout, mandibles atypical, rather robust, extending to the outer edge of the labrum and nearly to end of the basal third of its fellow, black except for the apical third which is reddish brown, palpi nearly typical; **thorax** covered with an abundance of white hairs, hairs of dorsulum mostly black and shorter than the hair of

mesopleura, dorsulum polished, sparsely punctured, the punctures minute and from three to five or more puncture widths apart, mostly the latter, notauli represented by a linear elevation of the tegument, mesopleura polished, with black hairs throughout, with distinct punctures that are from adjoining to three puncture widths apart, scutell hairy and sculptured much like the dorsulum, except that a discal area on each side of the middle line is nearly bare and nearly sculptureless, metanotum with white hair, shiny and sparsely punctured, tegulae brownish stramineous, polished, wing base mostly dark brownish stramineous, subcosta blackish brown, stigma dark brown with a blackish brown margin, first recurrent vein received by the second submarginal cell in or a little beyond the middle and distinctly farther from the second transverse cubitus than the first transverse cubitus is from the stigma on the radial vein, nervulus interstitial, forming an acute angle with the first abscissa of the discoidal vein, membrane tinged with brown, the radial cell contrastingly with a dark brown cloud, legs blackish brown excepting the middle and hind femora which are reddish brown, legs covered with whitish and brownish hairs, hind metatarsi at most hardly wider than middle metatarsi and nearly half as wide as hind tibiae at apex of the latter; **propodeum** with its enclosure poorly defined, with irregular concentric nearly transverse striae at base, elsewhere nearly polished, rounded off at apex, rest of upper face sculptured somewhat like the mesopleura but with smaller sparser punctures and covered with white hair, propodeal pleura along the upper edge sculptured apparently like the mesopleura, elsewhere impunctate and feebly reticulated, the sculpture not hidden by the uniformly distributed white hairs; **abdomen** with its tergum polished, sparsely minutely punctured, the punctures from two to many puncture widths apart, first and second tergites with erect whitish hairs, third, fourth and fifth tergites with sub-appressed blackish hairs, second tergite with its elevated portion down the middle : depressed portion :: 11: 6, apical edge of tergites pale stramineous, anal process broadly truncate at apex, tergum with rather inconspicuous hairs, that are supplemented on the apical margin of the first, second, third and fourth tergites by distinct whitish hair bands, hair at apex of abdomen of a brownish hue.

Andrena (Scapter) imitatrix var. **profunda** new variety

1909. *Andrena texana profunda* Viereck in Pierce, Rev. Strepsiptera, p. 195.

Type.—No. 4064, The Academy of Natural Sciences of Philadelphia. *Type locality*.—Fedor, Lee County, Texas. March 22, 1905. (G. Birkmann.) Also February 18, 1898. (G. Birkmann.)

Related to *A. (S.) imitatrix* var. *texana* Cresson, from which it differs in the fulvous or ochreous pubescence.

Other localities.—Georgia (H. K. Morrison); North Carolina (H. K. Morrison); Texas (Belfrage); N. Illinois (Nason); Colorado City, Colorado, May 10, at flowers of *Prunus* (W. P. & T. D. A. Cockerell).

Andrena (Scrapter) morrisonella new species

Type.—No. 4061, The Academy of Natural Sciences of Philadelphia. *Type locality*.—Georgia. (H. K. Morrison.)

Related to *A. (S.) imitatrix* Cresson.

Female.—Length 8.5 mm.; **body** black, mostly covered with pale ochreous or whitish hairs, **head** with its facial line : transfacial line :: 55: 63, axial line : temporal line :: 27: 13, malar line : joint 3 of antennae :: 1: 7, elevated portion of malar space virtually wanting, head covered with whitish hairs, front shiny and striato-punctate, the punctures from one to three puncture widths apart, not elevated along the inner foveal edge, fovea at most : ocellocular line :: 10: 10, fovea virtually contiguous to the upper end of the inner eye margin, fovea adjoining ocelli, fovea decidedly constricted near its middle where it is apparently only a little more than half as wide as the greatest width of the fovea, the latter continued below the constriction as a nearly parallel-sided furrow down to a point apparently on the clypeal line, fovea pale ochreous throughout, fovearea poorly developed, represented by a narrow, beveled, shiny space along the outer edge of the lower half of the fovea, face shiny, with large adjoining and nearly adjoining clear cut punctures, clypeus slightly elevated above the apical margin, convex, shiny and punctured much like the face, polished down the middle, clypearea poorly developed, represented by a median impunctate line, clypeus thinly hairy, its surface not at all hidden by hairs, labrarea subemarginate, width at base: length down the middle :: 10: 3, width at apex : length down the middle :: 4.5: 3, labrarea at base a little more than one third as wide as the labrum, the latter with a fringe of pale golden hairs, joint 3 of antennae : 4+5 :: 7: 8.5, joint 4 as thick as long, the succeeding joints apparently a little longer than thick, antennae blackish throughout, mandibles typical, robust, extending nearly to the outer edge of the labrum, black except for the apical half which is mostly dark reddish, palpi typical; **thorax** covered with an abundance of pale hairs which are ochreous on the dorsulum where they are shorter than the whitish hairs on the mesopleura, dorsulum dullish, finely reticulated, coarsely punctured, the punctures ranging from adjoining to two puncture widths apart, notauli represented by an elevated shiny line, mesopleura with whitish hairs, except along the upper margin where the hairs are pale ochreous, finely reticulated and more deeply and more coarsely punctured than the dorsulum, the punctures mostly adjoining, scutell hairy and sculptured much like the dorsulum except for being more coarsely punctured and having coarser hairs, metanotum hairy and sculptured like the dorsulum except that the sculpture is dense and the hairs closer together, tegulae dark brown, partly polished, wings with three submarginal cells, wing base dark brown, subcosta from pale to blackish brown, stigma pale brownish stramineous with a yellowish border, rest of veins dull stramineous with a blackish tinge, first recurrent vein received by the second submarginal cell beyond the middle and nearer to the second transverse cubitus than the first transverse cubitus is to the stigma on the radial vein, nervulus received by the median cell and forming a nearly acute angle with the second abscissa of the median

vein, legs dark brown except for the mid and hind tarsi and hind tibiae which are more or less yellowish stramineous, legs covered with pale golden or whitish hairs, scopa typical, its hairs of a golden hue, and concolorous throughout, with the hairs at base above slightly darkened, hind metatarsi at most apparently a little wider than mid metatarsi; **propodeum** with its enclosure well defined by a trenchant carina, shiny and with coarse crooked rugae on each side of a median longitudinal carina, rest of upper face of propodeum sculptured somewhat like the enclosure but not so coarsely, and covered with whitish hair, propodeal pleura with a few shallow finely reticulate excavations on their posterior half, sparsely punctured and finely reticulated on their anterior half, not hidden by the whitish floccus; **abdomen** with its tergum polished or nearly so, punctured, the punctures clear cut but small, from two to many puncture widths apart on the first tergite, from one to three or four puncture widths apart on the elevated portion of the second, third and fourth tergites where the punctures are not so close together as on the depressed portions, second tergite with its elevated portion down the middle : depressed portion :: 12: 9, fifth tergite shiny, reticulate, with its punctures from adjoining to four puncture widths apart, pygidium brownish, planate, rounded at apex, tergum with inconspicuous pale hairs, second, third and fourth tergites with an apical whitish hair band that is broadly interrupted on the second and third, fimbria golden.

Other locality.—Beltsville, Maryland. June 14, 1914. (W. L. McAtee.)

Andrena (Scapter) neonana new species

Type.—No. 4062, The Academy of Natural Sciences of Philadelphia. *Type locality*.—Georgia. (H. K. Morrison.)

Related to *A. (A.) personata* Robertson, but placed in the subgenus *Scapter* because of the antennae.

Female.—Length 6.5 mm.; **body** black, mostly covered with pale ochreous almost white hairs; **head** with its facial line : transfacial line :: 38: 46, axial line : temporal line :: 20: 11, elevated portion of malar space nearly as long as depressed portion, malar line : joint 3 of antennae :: 1: 4, ocelloccipital line : greatest diameter of lateral ocellus :: 2.5 : 3.5, head covered with whitish hairs, front rather indistinctly, longitudinally striate, not elevated into a welt along the fovea, fovea at most : ocellocular line :: 5: 8, foveal band represented at upper end of the inner eye margin by a beveled bare margin, distance between fovea and ocelli : ocellocular line :: 3: 8, fovea nearly parallel-sided throughout and continued below to a plane apparently a little below the antennal line, fovea filled with pale ochreous hairs, fovearea wanting, vertex and temples along the upper edge of the eye with pale ochreous hairs, face nearly polished, partly indistinctly reticulate, with indistinct punctures that are as many as five or more puncture widths apart, clypeus distinctly elevated above the apical margin, convex, sculptured like the face except that the punctures are larger and well defined, clypearea present but poorly defined, clypeus thinly hairy,

its sculpture not at all hidden by hairs, labrarea rounded, nearly semicircular in outline, its width at base : length down the middle :: 9:3, labrarea at base: distance between lower clypeal corners as 9:14, labrum with a thin fringe of golden hairs, labrum apparently without a median longitudinal crista between its apical edge and the labrarea, joint 3 of antennae : 4+5 :: 4:6, joints 4 and 5 thicker than long, the succeeding joints as thick as long or a little longer than thick except joints 11 and 12 which are distinctly longer than thick, antennae from pale to blackish brown, paler beneath than above, mandibles typical, robust, extending to a little beyond the outer edge of the labrarea, dark reddish except for the basal third which is partly blackish, palpi nearly typical, greatest thickness of 2nd joint of maxillary palpi : length of the same joint :: 1:3.5; **thorax** covered with an abundance of pale ochreous, almost white hairs which are as long on the dorsulum as the hairs on the mesopleura, dorsulum shiny, finely reticulated and punctured like the face but more distinctly so, notauli represented by a faint shiny line, mesopleura sculptured somewhat like the dorsulum but not so closely punctured, scutel hairy and nearly polished, its punctures spaced as on the dorsulum, the punctures however smaller and more sharply defined, metanotum hairy and sculptured like the dorsulum except that the sculpture is denser and less distinct, tegulae pale stramineous, partly polished, wing base dull stramineous, subcosta brownish, stigma pale stramineous, its lower margin brownish, rest of veins dull stramineous, with a blackish tinge, first recurrent vein received by the second submarginal cell beyond the middle and nearly twice as far from the second transverse cubitus as the first transverse cubitus is from the stigma on the radial vein, nervulus received by the median cell and forming an acute angle with the second abscissa of the median vein, membrane uniformly with a pale stramineous tinge, legs brownish except for the tarsi which are more or less pale stramineous, legs covered with pale ochreous and whitish hairs, scopa atypical, its hairs sparse, loosely arranged and whitish except at base above where they are golden, hind metatarsi apparently a little wider than middle metatarsi; **propodeum** with its enclosure poorly defined, shiny and finely reticulated, except for a network of coarse rugae, rest of upper face of propodeum sculptured somewhat like the enclosure but with a much finer network of carinae, and with fine pale ochreous hair, propodeal pleura finely reticulate and with sparse shallow punctures not almost hidden by the whitish floccus; **abdomen** with its tergum shiny and sculptured much like the metapleura, the punctures of the first tergite so sparse and indistinct as to appear wanting, the punctures hardly more evident on the succeeding tergites, second, third, and fourth tergites with a thin, apical, fringe of pale ochreous hair, not appearing banded, apical edge of first, second, third, and fourth tergites stramineous, second tergite with its elevated portion down the middle : depressed portion :: 10:6, fifth tergite shiny, reticulate, its punctures closer together and more distinct than on the other tergites, pygidium nearly planate, with a shallow furrow on each side, truncate at apex, tergum with inconspicuous, pale appressed hairs in addition to the fringes, fimbria pale golden with a faint brownish tinge.

Andrena (Scrapper) trapezoidea new species

Type.—No. 4075, The Academy of Natural Sciences of Philadelphia. *Type locality*.—Texas. (Belfrage No. 227.)

Related to *A. (S.) imitatrix* Cresson.

Female.—Length 7 mm.; **body** greenish black, mostly covered with white hairs with a more or less ochreous tinge; **head** with its facial line : transfacial line :: 40: 52, axial line : temporal line :: 22: 11, malar line : joint 3 of antennae :: 1: 5, ocelloccipital line : greatest diameter of lateral ocellus :: 5: 3.5, elevated portion of malar space virtually wanting, head covered with white hairs, front rather indistinctly, longitudinally striate, not elevated into a welt along the fovea, fovea at most : ocellocular line :: 6: 9, foveal band wanting at upper end of the inner eye margin, distance between fovea and ocelli : ocellocular line :: 3: 9, fovea attenuated below its middle where it is apparently only one-half or a little more than half as wide as the greatest width of the fovea, the latter continued to a plane apparently a little below the antennal line, fovea filled with pale, almost white hairs, fovearea wanting, face shiny, finely indistinctly reticulate, with shallow punctures that are as many as three puncture widths apart, clypeus elevated above the apical margin, convex, its basal half finely reticulated and with punctures that are three to four or five puncture widths apart, its apical half mostly polished and with larger but equally sparse punctures as on the basal half, clypearea poorly defined, clypeus thinly hairy, its sculpture not at all hidden by hairs, labrarea rounded truncate, its width at base : length down the middle :: 7: 2, width at apex : length down the middle :: 3: 2, labrarea at base : distance between lower angles of clypeus :: 7: 15, labrum with a fringe of pale golden hairs, labrum without a median longitudinal crista between the labrarea and apical edge of labrum, joint 3 of antennae : 4 + 5 :: 5: 6, joints 4 to 6 thicker than long, the succeeding joints as thick as long or a little longer than thick except joint 12 which is nearly twice as long as thick, antennae granular, with scape, pedicel, first joint of flagel and rest of flagel above more or less dark brown, rest of flagel orange color, mandibles typical, robust, extending to the outer lower angle of the clypeus, reddish brown except for the basal half which is blackish, palpi nearly typical; **thorax** thinly covered with almost white hairs that are nearly as long on the dorsulum as on the mesopleura, dorsulum nearly polished, purplish, finely reticulated and punctured like the clypeus, notauli represented by a shiny line, mesopleura with whitish hairs, densely reticulated and with shallow indefinite punctures, scutel hairy, polished and sculptured much like the dorsulum, metanotum hairy, mostly dullish, reticulated and sparsely punctured, tegulae dark brown, polished, wings with three closed submarginal cells, wing base brownish, subcosta brownish stramineous, stigma pale yellowish stramineous, rest of veins pale dull stramineous, first recurrent vein received by the second submarginal cell beyond the middle and farther from the second transverse cubitus than the first transverse cubitus is from the stigma on the radial vein, nervulus interstitial and forming an acute angle with the first abscissa of the discoidal vein, membrane almost colorless and with a

yellowish tinge, legs dark brown except for the hind tibiae, hind tarsi and small joints of fore and mid tarsi which are more or less pale brownish stramineous, legs covered with whitish and pale golden hairs, scopa atypical, its hairs whitish and arranged in much the same way as in *A. (A.) nasoni* Rob., hairs at base above also whitish, hind metatarsi at most apparently a little wider than mid metatarsi; **propodeum** with its enclosure poorly defined, shiny and finely reticulated, rest of upper face of propodeum sculptured somewhat like the mesopleura and covered with finer whitish hair, propodeal pleura with sparse shallow punctures, floccus white; **abdomen** with its tergum polished and sculptured much like the dorsulum but with smaller punctures and only slightly if at all metallic, the punctures from one to six or more puncture widths apart on the first tergite, the punctures closer on the succeeding tergites, mostly from one to three puncture widths apart and larger than on the first tergite, second, third and fourth tergites with an apical, whitish hair band, apical edge of first, second, third and fourth tergites with a pale stramineous border, second tergite with its elevated portion down the middle : depressed portion :: 12:7, fifth tergite shining, reticulate, its punctures closer together than on the other tergites, pygidium nearly planate, somewhat concave, rounded at apex, tergum satiny with inconspicuous appressed whitish hairs in addition to the hair bands, fimbria pale golden. In a paratype, from the same source as the type and with the same collector's number as the type, the tergites, clypeus and edge of parts adjoining the clypeus are more or less brown.

Allotype.—No. 4075, The Academy of Natural Sciences of Philadelphia. Fedor, Lee County, Texas, March 24, 1902. (G. Birkmann.)

Male.—Length 5.5 mm.; **body** black with a faint greenish or purplish tinge, mostly covered with whitish hair; **head** with its facial line : transfacial line :: 40:50, axial line : temporal line :: 21:10, temples not produced, rounded, malar line : joint 3 of antennae :: 1:4, elevated portion of malar space virtually wanting, head covered with whitish hairs throughout, front dullish, finely reticulated and finely longitudinally striate, ocellocular line : ocellocipital line :: 9:2.5, face shiny, indistinctly punctured, its punctures mostly from adjoining to one or two puncture widths apart, clypeus convex, more shiny and more distinctly punctured than the face, elevated directly above the apical margin, clypearea wanting, clypeal punctures as many as six puncture widths apart, sculpture of the clypeus not hidden by the moustache, labrarea subemarginate, polished, its width at base : greatest length :: 6:2, width at apex : length down the middle :: 2.5:1.5, labrarea at base : distance between lower angles of clypeus :: 6:12, labrum with a fringe of pale hairs, joint 3 of antennae : 4 :: 4:5, joint 4 : 5 :: 5:7, joint 5 and following joints nearly one and one-half times as long as thick, shiny, flagel, undulate in outline, antennae brownish throughout, mandibles atypical, robust, extending beyond the lower corners of the clypeus and nearly to end of the basal third of their fellow, black except for the apical half which is mostly dark reddish, palpi nearly

typical; **thorax** covered with an abundance of whitish hairs, hairs on dorsulum seemingly as long as the hair of mesopleura, dorsulum shiny, partly polished and purplish, finely reticulated, sparsely punctured, the punctures distinct and mostly from two to five puncture widths apart, mostly the latter, notauli represented by a shiny line, mesopleura shiny, almost dullish, with whitish hairs throughout, finely reticulated and mostly covered with shallow punctures that are mostly three or more puncture widths apart, scutel hairy, colored and sculptured much like the dorsulum but not so polished, metanotum black, hairy and sculptured like the scutel except that the sculpture is denser and less shiny, tegulae dark brown, polished, wing base mostly brownish stramineous, subcosta pale brownish stramineous, stigma yellowish stramineous with a brownish margin, first recurrent vein received by the second submarginal cell a trifle beyond the middle but not as near to the second transverse cubitus as the first transverse cubitus is to the stigma on the radial vein, nervulus interstitial, forming an acute angle with the first abscissa of the discoidal vein, membrane with a uniform yellowish tinge, legs blackish brown excepting the small joints of the tarsi which are rather pale stramineous, legs covered with whitish hairs, hind metatarsi at most a little wider than middle metatarsi and nearly half as wide as hind tibiae at apex of the latter; **propodeum** with its enclosure poorly defined, finely reticulated throughout, rounded off at apex, rest of upper face sculptured somewhat like the mesopleura but with less distinct punctures, propodeal pleura sculptured nearly like the mesopleura, propodeal hairs whitish; **abdomen** with its tergum shiny, partly polished, finely reticulated and distinctly punctured, the punctures mostly two or three puncture widths apart, first tergite with erect whitish hairs, second and third tergites with appressed whitish hairs, second tergite with its elevated portion down the middle : depressed portion :: 12:6, third and fourth tergites with whitish appressed hairs throughout, fifth tergite with its basal blackish portion covered with poorly defined punctures that are as many as four or more puncture widths apart, rest of fifth tergite and exposed portion of sixth and seventh tergites with a stramineous margin, anal process narrow, nearly hour-glass shaped, rounded at apex, and with a submarginal transverse carina, tergum with rather inconspicuous hairs, subfasciate, hair at apex of abdomen of a pale golden hue.

Andrena (Trachandrena) ceanothi new species

Type.—No. 4063, The Academy of Natural Sciences of Philadelphia. Type locality.—Lehigh Gap, Lehigh County, Pennsylvania. June 29, 1901, on flowers of *Ceanothus americanus* L. (H. L. Viereck.)

Related to *A. (T.) radiatula* Cockerell.

Female.—Length 10.5 mm.; **body** black, mostly covered with pale ochreous hairs; **head** with its facial line : transfacial line :: 63:69, axial line : temporal line :: 33:22, malar line : joint 3 of antennae :: 1:7, elevated portion of malar space virtually wanting, head covered with pale ochreous, almost whitish hairs,

front polished and punctured, the punctures as many as three puncture widths apart but mostly adjoining or one puncture width apart, front distinctly elevated along the inner eye margin, fovea at most : ocellular line :: 10: 13, foveal band wanting, fovea virtually contiguous to the upper end of the inner eye margin, distance between fovea and ocelli : ocellular line :: 2: 13, fovea decidedly constricted near its middle where it is apparently only one-third as wide as the greatest width of the fovea, the latter continued below the constriction as a narrowing furrow down to a plane apparently a little below the clypeal line, foveal hairs very pale ochreous, fovea widest a little above the middle of the fovea, angulated at its widest point where it is a little wider than the fovea is wide opposite the angulation of the fovea, the latter polished and with a few poorly defined punctures, face polished and with large adjoining and nearly adjoining punctures, clypeus slightly elevated above the apical margin, convex, polished and punctured, the punctures as many as eight puncture widths apart, clypea virtually wanting, clypeus thinly hairy, labra truncate, width at base : length down the middle :: 14: 4, width at apex : length down the middle :: 7: 4, labra at base : distance between lower angles of clypeus :: 14: 20, labrum with a fringe of golden hairs, joint 3 of antennae : 4+5 :: 7: 10, joint 4 thicker than long, the succeeding joints from as long as thick to longer than thick, antennae blackish brown throughout, mandibles typical, robust, extending to the outer edge of the labra, black except for the apical third which is mostly dark reddish, palpi nearly typical; **thorax** covered with an abundance of slender hairs which are slightly darker on the dorsum where they are a little shorter than the paler hairs on the mesopleura, dorsum partly polished, partly finely reticulated, coarsely punctured, the punctures ranging from nearly adjoining to two puncture widths apart, notauli represented by an impressed dullish line, mesopleura with very pale ochreous hairs except along the upper margin where the hairs are slightly darker, coarsely punctato-reticulate, scutell hairy and sculptured much like the dorsum, metanotum densely, indefinitely sculptured, tegulae pale stramineous, polished, wing base reddish brown and with a blackish spot, subcosta blackish brown, stigma yellowish stramineous, with its lower margin reddish brown, rest of veins dull brownish stramineous, first recurrent vein received by the second submarginal cell beyond the middle and a little nearer to the second transverse cubitus than the first transverse cubitus is to the stigma on the radial vein, nervulus interstitial and forming an acute angle with the first abscissa of the discoidal vein, legs blackish except for the tarsi which are more or less dark brown, covered with pale ochreous, golden and brownish hairs, scopa nearly typical, its hairs of a pale golden hue, and concolorous throughout except for the hairs at base above which are darkened, hind metatarsi at most apparently narrower than the mid metatarsi; **propodeum** with its enclosure poorly defined except at apex where its truncation is bounded by a trenchant carina, the enclosure with at least sixteen nearly longitudinal carinae, the interstices of which are finely reticulated, rest of upper face of propodeum sculptured somewhat like the mesopleura and covered with very pale ochreous hair, propodeal pleura finely reticulated, and sparsely punctured with shallow

punctures that are as many as eight puncture widths apart, propodeal floccus very pale ochreous, nearly whitish; **abdomen** with its tergum polished and densely punctured, the punctures clear cut and mostly adjoining or one puncture width apart on the first tergite, from adjoining to one or two puncture widths apart on the elevated portion of the second, third and fourth tergites where the punctures are a little larger than on the depressed portions and from one to four puncture widths apart on the depressed portions of the second, third, and fourth tergites, second tergite with its elevated portion down the middle : depressed portion :: 10: 18, fifth tergite with its surface finely reticulated and with nearly adjoining deep punctures, pygidium black, brownish at apex, its embossed area planate, the latter area bounded on each side by a deep furrow, pygidium truncate at apex, tergum with inconspicuous pale hairs, first, second, third, and fourth tergites with a broadly interrupted white hair band, fimbria pale golden.

Allotype.—No. 21,145, U. S. National Museum, Washington. Based on a specimen collected in Maryland near Plummer's Island, May 10, 1916, on flowers of *Washingtonia* (W. L. McAtee).

Male.—Length 7 mm.; **body** black, mostly covered with bright ochreous hair; **head** covered with bright ochreous hairs throughout, with its facial line : transfacial line :: 46: 54, axial line : temporal line :: 23: 13, temples rounded, malar line : joint 3 of antennae :: 1: 5, elevated portion of malar space virtually wanting, front striato-punctate, its striae indistinct and its punctures rather well defined, ocellocular line : ocellocipital line :: 10: 4, face polished and with large adjoining, or nearly adjoining punctures, clypeus apparently only slightly elevated directly above the apical margin, convex, polished and punctured much like the face, clypearea barely represented by a slight median longitudinal elevation, sculpture of the clypeus nearly hidden by the moustache, labrarea subemarginate, its width at base : length down the middle :: 7: 2.5, width at apex : length down the middle :: 4: 2.5, the latter length : greatest length :: 2.5: 3, labrarea at base : distance between lower angles of clypeus :: 7: 14, labrum with a fringe of golden hairs, joint 3 of antennae : 4 :: 5: 7.5, joint 4 and following joints from nearly twice as long as thick to one and one-half times as long as thick, end joint twice as long as thick, flagel dullish, flagel somewhat undulate in outline, antennae blackish throughout, mandibles atypical, robust, extending a little beyond the lower corner of the clypeus, black except for the apical third which is very dark reddish, palpi nearly typical; **thorax** covered with an abundance of slender, bright ochreous hairs, hairs of dorsulum somewhat shorter than the hair of mesopleura, dorsulum dullish, finely reticulated and coarsely punctured, the punctures ranging from adjoining to two puncture widths apart, notauli represented by an impressed dullish line, mesopleura with pale ochreous hairs throughout, mostly covered with shallow adjoining pits, scutel hairy and sculptured much like the dorsulum, metanotum hairy and densely sculptured, tegulae dark brownish stramineous, polished, and finely reticulated, wing base mostly blackish brown, subcosta blackish brown, stigma brownish stramineous, rest of veins dull stramineous, first recurrent vein received by the second submarginal cell beyond the middle

and a little nearer to the second transverse cubitus than the first transverse cubitus is to the stigma on the radial vein, nervulus received by the median cell and forming an acute angle with the second abscissa of the median vein, legs blackish excepting the small joints of the tarsi which are rather brownish, legs covered with pale ochreous and reddish hairs, hind metatarsi at most apparently distinctly wider than middle metatarsi and nearly half as wide as hind tibiae at apex of the latter; **propodeum** with its enclosure defined and truncate at apex, finely sculptured in the interstices between the nine or ten coarse and nearly longitudinal carinae, rest of upper face nearly as coarsely carinate as the enclosure but with the carinae forming coarse meshes, and covered with fine pale ochreous hair, propodeal pleura more diffusely reticulate than the mesopleura, propodeal floccus pale ochreous; **abdomen** with its tergum polished, punctured, the punctures small and not clear cut and from two to at least eight puncture widths apart on the first tergite, from one to five or more puncture widths apart on the elevated portion of the second, third, and fourth tergites where the punctures are larger than on the depressed portions where the punctures are also farther apart, second tergite with its elevated portion down the middle : depressed portion :: 9: 9, fifth tergite with its basal blackish portion covered with poorly defined punctures that are as many as four or more puncture widths apart, rest of fifth tergite and exposed portion of sixth and seventh tergites dark stramineous, anal process truncate, with rounded corners, brownish stramineous, tergum with rather inconspicuous pale hairs that are supplemented on the sides of the second, third, and fourth tergites by thin, pale, ochreous, apical hair bands, hair at apex of abdomen pale ochreous or pale golden.

Other localities.—Montgomery County, Maryland, June 12, 1916, a stylopized ♂ on *Ceanothus americanus* L., (J. C. Crawford) (U. S. N. M.); Rutland, Vermont, August 1, 1916, (Chittenden); Lahaway, Ocean County, New Jersey; Ramsey, N. J., June 5, 6, 18, 1916, (Jos. Bequaert), [Am. Mus. Nat. Hist.]; Lehigh Gap, Lehigh County, Pennsylvania, July 26, 1901 (H. L. V.); Manahawkin, New Jersey, May 30, 1910 (V. A. E. Daecke); Milwaukee, Wisconsin, June 6, 1903 (S. Graenicher), No. 1; Iowa, June, No. 1173 (Putnam); Maine (Norton); Giles County, Virginia, [A. N. S. P.]; Woodstock, Virginia, May 29 (N. Banks).